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PART 1 – DEFINITIONS, ABBREVIATIONS AND EDITORIAL CONVENTIONS

SUBPART A – DEFINITIONS

§1.1 General Definitions

ACAS-Passive surveillance

The process of tracking another aircraft without interrogating it, by using the other aircraft's extended squitters. ACAS uses the information obtained via 1090 MHz extended squitter to monitor the need for active surveillance, but not for any other purpose. Passive surveillance applies to both hybrid and extended hybrid surveillance.

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.

ACAS broadcast

A long Mode S air-air surveillance interrogation (UF = 16) with the broadcast address.

ACAS I

An ACAS which provides information as an aid to "see and avoid" action but does not include the capability for generating resolution advisories (RAs).

Note— ACAS I is not intended for international implementation and standardization by ICAO. Therefore only ACAS I characteristics required to ensure compatible operation with other ACAS configurations and interference limiting are defined in ICAO Annex 10 Vol. IV, Para 4.2.

ACAS II

An ACAS which provides vertical resolution advisories (RAs) in addition to traffic advisories (TAs).

ACAS III

An ACAS which provides vertical and horizontal resolution advisories (RAs) in addition to traffic advisories (TAs).

ACAS-Active surveillance

The process of tracking an intruder by using the information gained from the replies to own ACAS interrogations.

ACAS-Coordination

The process by which two ACAS-equipped aircraft select compatible resolution advisories (RAs) by the exchange of resolution advisory complements (RACs).

ACAS-Cycle

The term “cycle” used in the chapter 4 of ICAO Annex 10, Volume IV, refers to one complete pass through the sequence of functions executed by ACAS II or ACAS III, nominally once a second.

ACAS-Hybrid surveillance

The process of using a combination of active surveillance and passive surveillance with validated data to update an ACAS track in order to preserve ACAS independence.

ACAS-Original rate

The original rate of an ACAS-equipped aircraft at any time is its altitude rate at the same time when it followed the original trajectory.

ACAS-Sensitivity level (S)

An integer defining a set of parameters used by the traffic advisory (TA) and collision avoidance algorithms to control the warning time provided by the potential threat and threat detection logic, as well as the values of parameters relevant to the RA selection logic.

Note—For TA and RA selection, sensitivity level is not used in ACAS X compliant systems.

ACAS-Squitters

ACAS uses the information obtained via 1090 MHz extended squitter to monitor the need for active surveillance, but not for any other purpose. Passive surveillance applies to both hybrid and extended hybrid surveillance.

ACAS-Threat

An intruder deserving special attention either because of its close proximity to own aircraft or because successive range and altitude measurements indicate that it could be on a collision or near-collision course with own aircraft. The warning time provided against a threat is sufficiently small that an RA is justified.

ACAS-Track

A sequence of measurements representing positions that could reasonably have been occupied by an aircraft.

ACAS-Validation

The process of verifying the relative position of an intruder using passive information via 1090 MHz extended squitter by comparing it to the relative position obtained by ACAS active interrogation.

ACAS-Warning time

The time interval between potential threat or threat detection and closest approach when neither aircraft accelerates.

Accelerate-stop distance available (ASDA)

The length of the take-off run available plus the length of stopway, if provided.

Acceptable level of safety performance (ALoSP)

The level of safety performance agreed by State authorities to be achieved for the civil aviation system in a State, as defined in its State safety programme, expressed in terms of safety performance targets and safety performance indicators.

Acceptable Means of Compliance

A non-binding standard adopted by GACA to illustrate a means of compliance to a regulation.

Accepted-application

For any application, filing, method, procedure, or policy, the President has reviewed it and has neither objected to nor approved its proposed use or implementation.

Accepting unit

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

Accident

An occurrence associated with the operation of an aircraft which, in the case of a manned aircraft, takes place between the time any person boards the aircraft with the intention of flight until such time as all such persons have disembarked, or in the case of an unmanned aircraft, takes place between the time the aircraft is ready to move with the purpose of flight until such time as it comes to rest at the end of the flight and the primary propulsion system is shut down, 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 a single engine, (including its cowlings or accessories), to propellers, wing tips, antennas, probes, vanes, tires, brakes, wheels, fairings, panels, landing gear doors, windscreens, the aircraft skin (such as small dents or puncture holes), or for minor damages to main rotor blades, tail rotor blades, landing gear, and those resulting from hail or bird strike (including holes in the radome); or

c) the aircraft is missing or is completely inaccessible.

Note 1— For statistical uniformity only, an injury resulting in death within thirty days of the date of th accident is classified, by ICAO, as a fatal injury.

Note 2— An aircraft is considered to be missing when the official search has been terminated and th wreckage has not been located.

Note 3— The type of unmanned aircraft system to be investigated is addressed in 5.1 of the ICAO Anne 13.

Note 4— Guidance for the determination of aircraft damage can be found in Attachment F of the ICAO Annex 13.

Note 5— Also referred to as "aircraft accident".

Accident investigation authority

The authority designated by a State as responsible for aircraft accident and incident investigations within the context of the ICAO Annex 13.

Note—In KSA, Aviation Investigation Bureau (AIB) is the Accident investigation authority.

Accident investigation-Advisor

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.

Acclimated

A condition in which a flight crew member has been in a theater for 72 hours or has been given at least 36 consecutive hours free from duty.

Accompanying person

An adult who is travelling with a minor. This person will not necessarily be the parent or legal guardian of the minor.

Note— It is to be noted that this definition might need to be applied in light of any obligation resulting from the application of national regulations on border checks.

Accountable executive

A single, identifiable person having responsibility for the effective and efficient performance of the service provider's SMS.

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-investigation

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. Where the State has established an accident investigation authority, the designated accredited representative would normally be from that authority.

Accuracy

The closeness with which a measurement approaches the true value established independently.

Acrobatic flight

Maneuvers intentionally performed by an aircraft involving an abrupt change in its attitude, an abnormal attitude, or an abnormal variation in speed.

Active RAC

An RAC is active if it currently constrains the selection of the RA. RACs that have been received within the last six seconds and have not been explicitly cancelled are active.

Acts of unlawful interference

These are acts or attempted acts such as to jeopardize the safety of civil aviation and air transport, i.e.:

—unlawful seizure of aircraft in flight,

—unlawful seizure of aircraft on the ground,

—hostage-taking on board an aircraft or on aerodromes,

—forcible intrusion on board an aircraft, at an airport or on the premises of an aeronautical facility,

—introduction on board an aircraft or at an airport of a weapon or hazardous device or material intended for criminal purposes,

—communication of false information as to jeopardize the safety of an aircraft in flight or on the ground, of passengers, crew, ground personnel or the general public, at an airport or on the premises of a civil aviation facility.

Adapted competency model

A group of competencies with their associated description and performance criteria adapted from an ICAO competency framework that an organization uses to develop competency-based training and assessment for a given role.

Adaptive modulation

A system's ability to communicate with another system using multiple burst profiles and a system's ability to subsequently communicate with multiple systems using different burst profiles.

Admission to the State

The permission granted to a person to enter a State by the public authorities of that State in accordance with its national laws.

ADS-Cagreement

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

Note— The terms of the agreement will be exchanged between the ground system and the aircraft by mean of a contract, or a series of contracts.

Advance Passenger Information (API) System

An electronic communications system whereby required data elements are collected and transmitted to border control agencies prior to flight departure or arrival and made available on the primary line at the airport of entry.

Advanced aircraft

An aircraft with equipment in addition to that required for a basic aircraft for a given take-off, approach or landing operation.

Advanced-SMGCS

A system providing routing, guidance and surveillance for the control of aircraft and vehicles in order to maintain the declared surface movement rate under all weather conditions within the aerodrome visibility operational level (AVOL) while maintaining the required level of safety (Doc 9830 — Advanced Surfac Movement Guidance and Control Systems (A-SMGCS) Manual).

Advisory airspace

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

Advisory route

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

Aerial application operations

The operation of an aircraft for the purpose of dispensing any liquid or particulate matter.

Aerial work

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

Aero mobile-satellite (R) service (RR S1.36)

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

Aerodrome

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

Aerodrome beacon

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

Aerodrome certificate

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

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 radio station

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

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 elevation

The elevation of the highest point of the landing area.

Aerodrome facilities and equipment

Facilities and equipment, inside or outside the boundaries of an aerodrome, that are constructed or installed and maintained for the arrival, departure and surface movement of aircraft.

Aerodrome identification sign

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

Aerodrome infrastructure

Physical elements and related facilities of the aerodrome.

Aerodrome manual

The manual that forms part of the application for an aerodrome certificate pursuant to these regulations, including any amendments thereto accepted/approved by the CAA.

Aerodrome mapping data (AMD)

Data collected for the purpose of compiling aerodrome mapping information for aeronautical uses.

Note— Aerodrome mapping data are collected for purposes that include the improvement of the user's situational awareness, surface navigation operations, training, charting and planning.

Aerodrome mapping database (AMDB)

A collection of aerodrome mapping data organized and arranged as a structured data set.

Aerodrome meteorological office

An office designated to provide meteorological service for aerodromes serving international air navigation.

Aerodrome model

A model incorporated into the software of a flight simulation training device (FSTD) that is classified as follows:

a) Class I. Whether modeling real world or fictional aerodromes (or landing areas for rotorcraft), these aerodrome models (or landing areas for rotorcraft) are those that meet the requirements of Table A3B or C3B, found in attachment 2 of Appendix A or C to Title 14, Code of Federal Regulations of the United States (14 CFR) part 60, as appropriate, are evaluated by the President, and are listed on the Statement of Qualification(SOQ).

b) Class II. Whether modeling real world or fictional aerodromes (or landing areas for rotorcraft), these aerodrome models (or landing areas for rotorcraft) are those models in excess of those used for simulator qualification at a specified level. The FSTD sponsor is responsible for determining these models meet the requirements set out in Table A3C or C3C, found in attachment 2 of Appendix A or C to 14 CFR Part 60, as appropriate.

c) Class III. This is a special class of aerodrome model (or landing area for rotorcraft), used for specific purposes, and includes models that may be incomplete or inaccurate when viewed without restriction, but when appropriate limits are applied (for example, "valid for use only when reported visibility or RVR of 800 m or less is specified," "valid for use only for approaches to Runway 22L and 22R"), those features that may be incomplete or inaccurate may not be able to be recognized as such by the crew member being trained, tested, or checked. Class III aerodrome models used for training, testing, or checking activities require the certificate holder to submit to the President an appropriate analysis of the skills, knowledge, and abilities necessary for competent performance of the task(s) in which this particular model is to be used, and requires GACA acceptance of each Class III model.

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 2D instrument approach operations, expressed in terms of visibility and/or runway visual range and decision altitude/height (DA/H) and, if necessary, cloud condition; and

c) landing in 3D instrument approach operations, expressed in terms of visibility and/or runway visual range and decision altitude/height (DA/H) as appropriate to the type and/or category of the operation.

Aerodrome operator

In relation to a certificated aerodrome, means the aerodrome certificate holder.

Aerodrome reference point

The designated geographical location of an aerodrome.

Aerodrome traffic

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

Note— An aircraft is in the vicinity of an aerodrome when it is in, entering or leaving an aerodrom traffic circuit.

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.

Note 1— The number of movements in the mean busy hour is the arithmetic mean over the year of th number of movements in the daily busiest hour.

Note 2— Either a take-off or a landing constitutes a movement.

Aerodrome traffic zone

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

Aerodrome/standby reserve

A defined duty period during which a flight crew member is required by a certificate holder to be at an aerodrome for a possible assignment.

Aerodrome-SMS

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 the control of safety at, and the safe use of, the aerodrome.

Aerodynamic coefficients

Non-dimensional coefficients for aerodynamic forces and moments.

Aerodynamic diameter of a particle

The diameter of an equivalent sphere of unit density ($1 g/cm^3$) with the same settling velocity as the particle in question, also referred to as “aerodynamic diameter”.

AeroMACS downlink (DL)

The transmission direction from the base station (BS) to the mobile station (MS).

AeroMACS handover

The process in which a mobile station (MS) migrates from the air-interface provided by one base station (BS) to the air-interface provided by another BS. A break-before-make AeroMACS handover is where service with the target BS starts after a disconnection of service with the previous serving BS.

AeroMACS uplink (UL)

The transmission direction from the mobile station (MS) to the base station (BS).

Aeronautical administrative communications (AAC)

Communications necessary for the exchange of aeronautical administrative messages.

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.

Note— Also referred to as "aeronautical ground light".

Aeronautical broadcasting service

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

Aeronautical chart

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

Aeronautical data

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

Aeronautical experience-Pilot

Pilot time obtained in an aircraft or flight simulation training device (FSTD) for meeting the appropriate training and flight time requirements for an airman certificate or rating, or recency of flight experience requirements.

Aeronautical facility

a) Thevarioustypesofcommunicationsystemsusedforanaeronauticalbroadcastingservice,oranaeronautical fixed service, that supports IFR flight or an air traffic service;

b) The ground elements of the various types of communication systems used for an aeronautical mobile service;

c) The various types of radio navigation aids used for the aeronautical radio navigation service;

d) Any other type of ground-based telecommunication system that supports IFR flight or an air traffic service; or

e) The various types of ground based telecommunication systems that operate in the aeronautical mobile radio frequency bands and are used to provide basic weather information, local aerodrome information, or flight following services.

Aeronautical fixed circuit

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

Aeronautical fixed service (AFS)

A telecommunication service between specified fixed points provided primarily for the safety of air navigation and for the regular, efficient and economical operation of air services.

Aeronautical fixed station

A station in the aeronautical fixed service.

Aeronautical fixed telecommunication network (AFTN)

A worldwide system of aeronautical fixed circuits provided, as part of the aeronautical fixed service, for the exchange of messages and/or digital data between aeronautical fixed stations having the same or compatible communications characteristics.

Aeronautical 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 management (AIM)

The dynamic, integrated management of aeronautical information through the provision and exchange of quality-assured digital aeronautical data in collaboration with all parties.

Aeronautical information product

Aeronautical data and aeronautical information provided either as digital data sets or as a standardized presentation in paper or electronic media. Aeronautical information products include:

—Aeronautical Information Publication (AIP), including Amendments and Supplements;

—Aeronautical Information Circulars (AIC);

—aeronautical charts;

—NOTAM; and

—digital data sets.

Note—Aeronautical information products are intended primarily to satisfy international requirement for the exchange of aeronautical information.

Aeronautical Information Publication (AIP)

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

Aeronautical information service (AIS)

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

Aeronautical meteorological station

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

Aeronautical Mobile Airport Communications System (AeroMACS)

A high-capacity data link supporting mobile and fixed communications on the aerodrome surface for both fixed and mobile application.

Aeronautical mobile (R) ^{route} 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 service (RR S1.32)

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

Aeronautical mobile-satellite (R) service

Aeronautical mobile-satellite (Route) service (RR S1.33): An aeronautical mobile-satellite service reserved for communications relating to safety and regularity of flights, 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 onboard aircraft; survival craft stations and emergency position-indicating radio beacon stations may also participate in this service.

Aeronautical operational control (AOC)

Communication required for the exercise of authority over the initiation, continuation, diversion or termination of flight for safety, regularity and efficiency reasons.

Aeronautical radio navigation service (RR S1.46)

A radio navigation service intended for the benefit and for the safe operation of aircraft.

Note— The following Radio Regulations are quoted for purposes of reference and/or clarity in understanding of the above definition of the aeronautical radio navigation service:

RR S1.10 Radio navigation: Radio determination used for the purpose of navigation, including obstruction warning.

RR S1.9 Radio determination: The determination of the position, velocity and/or other characteristics of an object, or the obtaining of information relating to these parameters, by means of the propagation properties of

radiowaves.

Aeronautical station (RR S1.81)

A land station in the aeronautical mobile service. In certain instances, an aeronautical station may be located, for example, on board ship or on a platform at sea.

Aeronautical telecommunication agency

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

Aeronautical telecommunication log

A record of the activities of an aeronautical telecommunication station.

Aeronautical telecommunication network (ATN)

A global internetwork architecture that allows ground, air-ground and avionic data subnetworks to exchange digital data for the safety of air navigation and for the regular, efficient and economic operation of air traffic services.

Aeronautical telecommunication service

A telecommunication service provided for any aeronautical purpose.

Aeronautical telecommunication station

A station in the aeronautical telecommunication service.

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.

Note — Also referred to as "airplane".

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 airplane flight manual prescribed by the certificating authority or equivalent data from the airplane manufacturer. Field length means balanced field length for airplanes, if applicable, or take-off distance in other cases.

Note— Attachment A, Section 2, provides information on the concept of balanced field length and th Airworthiness Manual (Doc 9760) contains detailed guidance on matters related to take-off distance.

Affects (or Affected)-Aircraft structure

The structure has been physically repaired, altered, or modified, or the structural loads acting on the structure have been increased or redistributed.

Afterburning

A mode of engine operation wherein a combustion system fed (in whole or part) by vitiated air is used.

AFTN circuit

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

AFTN communication center

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

AFTN destination station

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

AFTN entry-exit points

Centers through which AFTN traffic entering and leaving an ICAO Air Navigation Region should flow.

AFTN group

Three or more radio stations in the aeronautical fixed telecommunications network exchanging communications on the same radio frequency.

AFTN origin station

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

AFTN station

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

Note— In KSA, the AFTN operates under the authority of GACA.

Agent for service

A person designated by a certificate holder to receive legal notices or processes on its behalf.

Agreement summary (ICAO Article 83 bis)

When an aircraft is operating under an Article 83 bis agreement between the State of Registry and another State, the agreement summary is a document transmitted with the Article 83 bis Agreement registered with the ICAO Council that identifies succinctly and clearly which functions and duties are transferred by the State of Registry to that other State.

Note— The other State in the above definition refers to the State of the Operator for commercial ai

transport operations.

AIP Amendment

Permanent changes to the information contained in the AIP.

Air agency

A school, training center, repair station or Aviation Recreation Organization holding a certificate issued by the President.

Air ambulance operations

The transportation of medical patients by aircraft between one aerodrome and another aerodrome.

Air defense 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.

Air operator certificate (AOC)

A certificate authorizing an operator to carry out specified commercial air transport.

Air traffic

All aircraft in flight or operating on the maneuvering area of an aerodrome.

Air traffic advisory service

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

Air traffic control clearance

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

Note 1— For convenience, the term "air traffic control clearance" is frequently abbreviated t "clearance" when used in appropriate contexts.

Note 2— The abbreviated term "clearance" may be prefixed by the words "taxi," "take-off," "departure "en route," "approach" or "landing" to indicate the particular portion of flight to which the air traffi control clearance relates.

Air traffic control service

A service provided for the purpose of:

a) preventing collisions:

1) between aircraft, and

2) on the maneuvering area between aircraft and obstructions; and

b) expediting and maintaining an orderly flow of air traffic.

Air traffic control unit

A generic term meaning variously, area control center, approach control unit or aerodrome control tower.

Air traffic controller schedule

A plan for allocating air traffic controller duty periods and non-duty periods over a period of time.

Note— Also referred to as "Controllers roster".

Air traffic flow management (ATFM)

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

Air traffic management (ATM)

The dynamic, integrated management of air traffic and airspace (including air traffic services, airspace management and air traffic flow management) — safely, economically and efficiently — through the provisi of facilities and seamless services in collaboration with all parties and involving airborne and ground-basedfunctions.

Air traffic service (ATS)

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

Air 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.

Note— ATS airspaces are classified as Class A to G as described in 2.6 of the ICAO Annex 11.

Air traffic services reporting office

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

Note— An air traffic services reporting office may be established as a separate unit or combined with a existing unit, such as another air traffic services unit, or a unit of the aeronautical information service.

Air traffic services unit (ATSU)

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

Air transit route

A defined route for the air transiting of helicopters.

Air/fuel ratio

The mass rate of airflow through the hot section of the engine divided by the mass rate of fuel flow to the engine.

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.

Airborne collision avoidance system (ACAS)

An aircraft system based on secondary surveillance radar (SSR) transponder signals which operates independentlyof ground-based equipment to provide advice to the pilot on potential conflicting aircraft that are equipped withSSR transponders.

Note— SSR transponders referred to above are those operating in Mode C or Mode S. ACAS may also useautomatic dependent surveillance — broadcast (ADS-B) signals received from other aircraft to improve itsperformance.

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 — category

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

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.

Aircraft address

A unique combination of twenty-four bits available for assignment to an aircraft for the purpose of airground communications, navigation and surveillance.

Note— SSR Mode S transponders transmit extended squitters to support the broadcast of aircraft-derived position for surveillance purposes. The broadcast of this type of information is a form of automatic dependent surveillance (ADS) known as ADS-broadcast (ADS-B).

Aircraft avionics

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

Note— Also referred to as "avionics".

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.

Applicable until 27 Nov 2024.

Aircraft classification rating (ACR)

A number expressing the relative effect of an aircraft on a pavement for a specified standard subgrade category.

Applicable as of 28 Nov 2024.

Aircraft data circuit-terminating equipment (ADCE)

An aircraft specific data circuit-terminating equipment that is associated with an airborne data link processor (ADLP). It operates a protocol unique to Mode S data link for data transfer between air and ground.

Aircraft data link processor (ADLP)

An aircraft-resident processor that is specific to a particular air-ground data link (e.g. Mode S) and which provides channel management, and segments and/or reassembles messages for transfer. It is connected to one side of aircraft elements common to all data link systems and on the other side to the air-ground link itself.

Aircraft earth station (AES)

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

Aircraft equipment

Articles, including first-aid and survival equipment and commissary supplies, but not spare parts or stores, for use on board an aircraft during flight.

Aircraft maintenance schedule

A document that 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.

Note— Also referred to as Aircraft Maintenance Program (AMP).

Aircraft observation

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

Aircraft operating agency

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

Aircraft operating manual

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

Note — The aircraft operating manual is part of the operations manual.

Aircraft operator

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

Aircraft operators' documents

Air waybills/consignment notes, passenger tickets and boarding passes, bank and agent settlement plan documents, excess baggage tickets, miscellaneous charges orders (M.C.O.), damage and irregularity reports, baggage and cargo labels, timetables, and weight and balance documents, for use by aircraft operators.

Aircraft required to be operated with a co-pilot

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

Aircraft security check

An inspection of the interior of an aircraft to which passengers may have had access and an inspection of the hold for the purposes of discovering suspicious objects, weapons, explosives or other dangerous devices, articles and substances.

Aircraft security search

A thorough inspection of the interior and exterior of the aircraft for the purpose of discovering suspicious objects, weapons, explosives or other dangerous devices, articles or substances.

Aircraft stand

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

Aircraft station (RR S1.83)

A mobile station in the aeronautical mobile service, other than a survival craft station, located on board an aircraft.

Aircraft Tracking

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

Aircraft/vehicle

May be used to describe either a machine or device capable of atmospheric flight, or a vehicle on the airport surface movement area (i.e. runways and taxiways).

Aircraft-based augmentation system (ABAS)

An augmentation system that augments and/or integrates the information obtained from the other GNSS elements with information available on board the aircraft.

Airframe

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

Air-ground communication

Two-way communication between aircraft and 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.

Air-initiated protocol

A procedure initiated by a Mode S aircraft installation for delivering a standard length or extended length downlink message to theground.

Airline

As provided in Article 96 of the Convention, any air transport enterprise offering or operating a scheduled international air service.

Airman

A person holding, or required to hold, a current and valid certificate or authorization issued under GACAR Part 61, 64, 65 or66.

Airmanship

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

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-report

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

Note— Details of the AIREP form are given in the PANS-ATM (Doc 4444).

Airship

A power-driven lighter-than-air aircraft.

Airside

The movement area of an airport, adjacent terrain and buildings or portions thereof, access to which is controlled.

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).

Note— The actual height may vary, and some helicopters may require air-taxiing above 8 m (25 ft) AGL t reduce ground effect turbulence or provide clearance for cargo slingloads.

Air-to-ground communication

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

Airway

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

Airworthiness certificate

A document issued by a state certifying that an aircraft complies with the design aspects of appropriate airworthiness requirements.

Note— Also referred to as "Certificate of Airworthiness".

Airworthiness directive (AD)

A legally enforceable rule that applies to aircraft registered in the Kingdom of Saudi Arabia. ADs are designed to be applicable to specific types of aircraft or engines, propellers, and articles that are part of the aircraft type design, even if an individual product or article has been changed by modifying, altering, or repairing it in the area addressed by an airworthinessdirective.

Airworthy

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

AIS product

Aeronautical data and 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.

ALERFA

The code word used to designate an alert phase.

Alert

An indication provided to other aircraft systems or annunciation to the pilot to identify that an operating parameter of a navigation system is out of tolerance.

Alert limit

For a given parameter measurement, the error tolerance not to be exceeded without issuing an alert.

Alert phase

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

Alerting post

Any facility intended to serve as an intermediary between a person reporting an emergency and a rescue coordination center or rescue subcenter.

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 where the necessary services and facilities are available,

where aircraft performance requirements can be met and which is operational at the expected time of use. Alternate aerodromes include the following:

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

En-route alternate**.** An alternate aerodrome at which an aircraft would be able to land in the event that a diversion becomes necessary while en route.

Destination alternate**.** An alternate aerodrome at which an aircraft would be able to land should it become either impossible or inadvisable to land at the aerodrome of intended landing.

Note— The aerodrome from which a flight departs may also be an en-route or a destination alternat aerodrome for that flight.

Alternate heliport

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

Take-off alternate. An alternate heliport at which a helicopter would be able to land should this become necessary shortly after take-off and it is not possible to use the heliport of departure.

En-route alternate. An alternate heliport at which a helicopter would be able to land in the event that a diversion becomes necessary while en route.

Destination alternate. An alternate heliport at which a helicopter would be able to land should it become either impossible or inadvisable to land at the heliport of intended landing.

Note— The heliport from which a flight departs may be an en-route or a destination alternate heliport fo that flight.

Alternative means of communication

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

Alternative Means of Compliance (AltMOC)

An alternative to an existing acceptable means of compliance or to a means of establishing compliance with a regulation.

Altimetry system error (ASE)

The difference between the altitude indicated by the altimeter display, assuming a correct altimeter barometric setting, and the pressure altitude corresponding to the undisturbed ambient pressure.

Altitude

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

Altitude crossing RA

A resolution advisory is altitude crossing if own ACAS aircraft is currently at least 30 m (100 ft) below or above the threat aircraft for upward or downward sense advisories, respectively.

Altitude layer

Each encounter is attributed to one of six altitude layers as follows:

Layer	*1*	*2*	*3*	*4*	*5*	*6*
from		2 300 ft	5 000 ft	10 000 ft	20 000 ft	41 000 ft
to	2 300 ft	5 000 ft	10 000 ft	20 000 ft	41 000 ft	

The altitude layer of an encounter is determined by the average altitude of the two aircraft at closest approach.

Note— For the purposes of defining the performance of the collision avoidance logic, there is no need to specify the physical basis of the altitude measurement or the relationship between altitude and ground level.

Ambient noise

The acoustical noise from sources other than the test aircraft present at the microphone site during aircraft noise measurement. Ambient noise is one component of background noise.

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 a vacuum, would produce between these conductors a force equal to 2×10^{-7} newton per metre of length.

Angular displacement sensitivity

The ratio of measured DDM to the corresponding angular displacement from the appropriate reference line.

Antenna port

A point where the received signal power is specified. For an active antenna, the antenna port is a fictitious point between the antenna elements and the antenna pre-amplifier. For a passive antenna, the antenna port is the output of the antenna itself.

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.

Applicable regulation

Regulations applicable to the aerodrome and to the aerodrome operator that are transposed from international specifications and other relevant regulations.

Application-data processing

Manipulation and processing of data in support of user requirements (ISO 19104, Geographic information on Terminology).

Application entity(AE)

An AE represents a set of ISO/OSI communication capabilities of a particular application process (see ICAO Annex 10 Vol III, ISO/IEC 9545 for further details).

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.

Approach angle

The difference in the ground headings of the two aircraft at closest approach, with 180 degrees defined as head on and 0 degrees defined as parallel.

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 phase

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

Appropriate airworthiness requirements

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

Appropriate ATS authority

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

Note— In KSA, GACA designated Saudi Air Navigation Services (SANS) provides air traffic services.

Appropriate authority

a) The relevant authority of the State of Registry for the flight over the highseas.

b) The relevant authority of the State having sovereignty over the territory being overflown for the flight other than over the high seas.

Approval of Dangerous Goods

An authorization granted by an appropriate national authority for:

a) the transport of dangerous goods forbidden on passenger and/or cargo aircraft where the Technical Instructions state that such goods may be carried with an approval;or

b) other purposes as provided for in the ICAO Technical Instructions.

Note— In the absence of a specific reference in the ICAO Technical Instructions allowing the granting o an approval, an exemption may be sought.

Approved

Accepted by a Contracting State as suitable for a particular purpose.

Approved data

Data approved, or deemed approved, by the President for use in the performance of repairs and alterations to products and articles. Approved data includes, but is not limited to, type design data approved under GACAR Part 21, structural repair manuals issued by aircraft manufacturers, and design data referred to in airworthiness directives.

Approved maintenance organization

An organization approved by a Contracting State, in accordance with the requirements of the ICAO Annex 8, Part II, Chapter 6 — Maintenance Organization Approval, to perform maintenance of aircraft, engine propeller or parts thereof and operating under supervision approved by that State.

Note—In KSA, Repair Station / Aircraft Maintenance Organization approval is granted by the Presiden of GACA.

Approved training

Training conducted under special curricula and supervision approved by the President.

Approved training organization

An organization approved by and operating under the supervision of a Contracting State in accordance with the requirements of the ICAO Annex 1 to perform approved training.

Note—in KSA, training organizations are approved by the President under the provisions of GACAI Parts 141, 142, 143, 144 and 147.

Apron

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

Apron management service

A service provided to regulate the activities and the movement of aircraft and vehicles on an apron.

Area control center

A unit established to provide air traffic control service to controlled flights in control areas under its jurisdiction. *Note— Also referred to as "apron control center".*

Area control service

Air traffic control service for controlled flights in control areas.

Area minimum altitude (AMA)

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

Area navigation (RNAV)

A method of navigation which permits aircraft operation on any desired flight path within the coverage of ground- or space-based navigation aids or within the limits of the capability of self-contained aids, or a combination of these.

Note— Area navigation includes performance-based navigation as well as other operations that do no meet the definition of performance-based navigation.

Area navigation (RNAV) specification

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

Note 1— The Performance-based Navigation (PBN) Manual (Doc 9613), Volume II, contains detailed guidance on navigation specifications.

Note 2— The term RNP, previously defined as "a statement of the navigation performance necessary fo operation within a defined airspace", has been removed from the ICAO Annex 15 as the concept of RNP has been overtaken by the concept of PBN. The term RNP is now solely used in the context of navigation specifications that require performance monitoring and alerting, e.g. RNP 4 refers to the aircraft and operating requirements, including a 4 NM lateral performance with on-board performance monitoring and alerting that are detailed in the ICAO Doc9613.

Area navigation route

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

Armed Forces

The Royal Saudi Air Force, Royal Saudi Land Force, Royal Saudi Navy, Royal Saudi Air Defense, Saudi Arabian National Guard, and foreign military personnel serving under the command and acting under the orders of the Kingdom of Saudi Arabia.

Arresting system

A system designed to decelerate an airplane overrunning the runway.

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.

Assemble

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

Note— The assemble phase includes checking the data and ensuring that detected errors and omission are rectified.

Associated aircraft systems

Those aircraft systems drawing electrical/pneumatic power from an auxiliary power unit during ground operations.

ATS direct speech circuit

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

ATS interfacility data communication (AIDC)

Automated data exchange between air traffic services units in support of flight notification, flight coordination, transfer of control and transfer of communication.

ATS message handling service (ATSMHS)

An ATN application consisting of procedures used to exchange ATS messages in store-and-forward mode over the ATN such that the conveyance of an ATS message is in general not correlated with the conveyance of another ATS message by the service provider.

ATS message handling system (AMHS)

The set of computing and communication resources implemented by ATS organizations to provide the ATS message handling service.

ATS route

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

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

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

ATS surveillance service

Term used to indicate a service provided directly by means of an ATS surveillance system.

ATS surveillance system

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

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

Augmented flight crew

A flight crew that has more than the minimum number of flight crew members required by the aircraft type certificate to operate the aircraft to allow a flight crew member to be replaced by another qualified flight crew member for in-flight rest.

Authorized

With respect to an operation or action, that the President or other relevant authority permits that operation or action. Authorization may be formal or informal.

Authorized agent

A person who represents an aircraft operator and who is authorized by or on behalf of such operator to act on formalities connected with the entry and clearance of the operator's aircraft, crew, passengers, cargo, mail, baggage or stores and includes, where national law permits, a third party authorized to handle cargo on the aircraft.

Note— also referred to as "authorized representative".

Authorized Economic Operator

AEO is a party involved in the international movement of goods in whatever function that has been approved by or on behalf of a national Customs administration as complying with WCO or equivalent supply chain security standards. AEOs may include manufacturers, importers, exporters, brokers, carriers, consolidators, intermediaries, ports, airports, terminal operators, integrated operators, warehouses, distributors and freight forwarders.

Note— The definition is aligned with that found in the World Customs Organization's "SAFE Framework of Standards to Secure and Facilitate Global Trade."

Authorized instructor

a) A person who holds a ground instructor certificate issued under GACAR Part 61 and is in compliance with GACAR § 61.217, when conducting ground training in accordance with the privileges and limitations of his ground instructor certificate;

b) A person who holds a flight instructor certificate issued under GACAR Part 61 and is in compliance with GACAR § 61.201, when conducting ground training or flight training in accordance with the privileges and limitations of his flight instructor certificate; or

c) A person authorized by the President to provide ground training or flight training under GACAR Part 121, 133, 135, 142, or 143 when conducting ground training or flight training in accordance with that authority.

Authorized path

A communication path suitable for a given message category.

Authorizing document

A document issued by the President to an entity regulated under the GACAR and that specifies authorizations, conditions and limitations associated with specific activities that have been authorized by the President. Types of authorizing documents include, but are not limited to, air operator certificates, airmen certificates, aerodrome certificates, air agency certificates, operations specifications, certificates of authorization, and certificates of waiver.

Automated Border Control (ABC)

An automated system which authenticates the electronic machine readable travel document or token, establishes that the passenger is the rightful holder of the document or token, queries border control records, then determines eligibility for border crossing according to pre defined rules.

Automatic dependent surveillance-Broadcast (ADS-B)

A means by which aircraft, aerodrome vehicles and other objects can automatically transmit and/or receive data such as identification, position and additional data, as appropriate, in a broadcast mode via a data link.

ADS-B OUT: A function on an aircraft or vehicle that periodically broadcasts its state vector (position and velocity) and other information derived from on-board systems in a format suitable for ADS-B IN capablere ceivers.

ADS-B IN: A function that receives surveillance data from ADS-B OUT data sources.

Automatic dependent surveillance-Contract (ADS-C)

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

Note— The abbreviated term "ADS contract" is commonly used to refer to ADS event contract, AD demand contract, ADS periodic contract or an emergency mode.

Automatic deployable flight recorder (ADFR)

A combination flight recorder installed on the aircraft which is capable of automatically deploying from the aircraft.

Automatic relay installation

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

Note— This term covers both fully automatic and semi-automatic installations.

Automatic telecommunication log

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

Automatic terminal information service (ATIS)

The automatic provision of current, routine information to arriving and departing aircraft throughout 24 hours or a specified portion thereof:

Data link-automatic terminal information service (D-ATIS). The provision of ATIS via data link.

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

Autonomous runway incursion warning system (ARIWS)

A system which provides autonomous detection of a potential incursion or of the occupancy of an active runway and a direct warning to a flight crew or a vehicle operator.

Autorotation

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

Auxiliary power unit (APU)

A self-contained power unit on an aircraft providing electrical/pneumatic power to aircraft systems during ground operations or in flight, separate from the propulsion engine(s).

Auxiliary rotor

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.

Average crosswind component

Average crosswind component shall be determined from the series of individual values of the “cross-track” (v)component of the wind samples obtained during the aircraft test run, using a linear averaging process over 30seconds or an averaging process that has a time constant of no more than 30 seconds, the result of which is read outat a moment approximately 15 seconds after the time at which the aircraft flight path intercepts the verticalgeometrical plane perpendicular to the reference ground track at the center microphone.

Note— The reference ground track is defined in ICAO Annex 16 Para 8.1.3.5.

Average radius of rated coverage

The radius of a circle having the same area as the rated coverage.

Average wind speed

Average wind speed shall be determined from the series of individual wind speed samples obtained during the aircraft test run, using a linear averaging process over 30 seconds, or an averaging process that has a time constant of no more than 30 seconds, the result of which is read out at a moment approximately 15 seconds after the time at which the aircraft passes either over or abeam the microphone. Alternatively, each wind vector shall be broken down into its “along-track” (u) and “cross-track” (v) components. The u and v components of the series of individual wind samples obtained during the aircraft test run shall be separately averaged using a linear averaging process over 30 seconds, or an averaging process that has a time constant of no more than 30 seconds, the result of which is read out at a moment approximately 15 seconds after the time at which the aircraft flight path intercepts the vertical geometrical plane perpendicular to the reference ground track at the center microphone. The average wind speed and direction (with respect to the track) shall then be calculated from the averaged u and v components according to Pythagorean Theorem and

"arctan(v/u)".

Aviation medical examiner (AME)

A physician with training in aviation medicine and practical knowledge and experience of the aviation environment, who is designated by the President under GACAR Part 183 to conduct medical examinations of fitness of applicants for medical certificates under GACAR Part 67.

Aviation Recreation Organization

An organization that has been established for the purposes of promoting and supporting recreational aviation activities and special aviation events within the Kingdom of Saudi Arabia.

Aviation security

Safeguarding civil aviation against acts of unlawful interference. This objective is achieved by a combination of measures and human and material resources.

Aviation training device (ATD)

A device that incorporates representations of aircraft instruments and controls to simulate instrument flight operations.

Axialratio

The ratio, expressed in decibels, between the maximum output power and the minimum output power of an antenna to an incident linearly polarized wave as the polarization orientation is varied over all directions perpendicular to the direction of propagation.

Back course sector

The course sector which is situated on the opposite side of the localizer from the runway.

Background check

A check of a person's identity and previous experience, including where legally permissible, any criminal history, as part of the assessment of an individual's suitability to implement a security control and/or for unescorted access to a security restricted area.

Background noise

The combined noise present in a measurement system from sources other than the test aircraft, which can influence or obscure the aircraft noise levels being measured. Typical elements of background noise include (but are not limited to): ambient noise from sources around the microphone site; thermal electrical noise generated by components in the measurement system; magnetic flux noise ("tape hiss") from analogue tape recorders; and digitization noise caused by quantization error in digital converters. Some elements of background noise, such as digitization noise, can obscure the aircraft noise signal, while others, such as

ambient noise, can also contribute energy to the measured aircraft noise signal.

Baggage

Personal property of passengers or crew carried on an aircraft by agreement with the operator.

Balked landing

A landing maneuver that is unexpectedly discontinued at any point below the obstacle clearance altitude/height (OCA/H).

Balloon

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

Banner

A visual medium supported by a temporary framework attached externally to an aircraft and towed by that aircraft.

Banner towing operation

The operation of an aircraft for the purpose of pulling or towing a banner or similar object attached to the aircraft by a line or cable.

Bare Earth

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

Barrette

Three or more aeronautical ground lights closely spaced in a transverse line so that from a distance they appear as a short bar of light.

Base aircraft

An aircraft identified by a certificate holder for use as a reference to compare differences with another aircraft.

Base station (BS)

A generalized equipment set providing connectivity, management and control of the mobile station (MS).

Base turn

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

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

Based and primarily used in the KSA

An aircraft where the flight hours accumulated within the Kingdom of Saudi Arabia amount to at least 60 percent of the total flight hours of the aircraft during the period consisting in the remainder of the registration month and the following 6 months and each 6 month period thereafter. Any periods during which the aircraft is not validly registered in the Kingdom of Saudi Arabia are disregarded.

Baseline structure

A structure that is designed under the original type certificate or amended type certificate for an airplane model.

Basic aircraft

An aircraft which has the minimum equipment required to perform the intended take-off, approach or landing operation.

BDS Comm-B Data Selector

The 8-bit BDS code determines the register whose contents are to be transferred in the MB field of a Comm-B reply. It is expressed in two groups of 4 bits each, BDS1 (most significant 4 bits) and BDS2 (least significant 4 bits).

Becquerel (Bq)

The activity of a radionuclide having one spontaneous nuclear transition per second.

Behavior detection

Within an aviation security environment, the application of techniques involving the recognition of behavioral characteristics, including but not limited to physiological or gestural signs indicative of anomalous behavior, to identify persons who may pose a threat to civil aviation.

Bi-binary

Bi-binary is known as “Manchester Encoding”. It is sometimes referred to as “Differential Manchester Encoding”. Using this system, it is the transition of the edge that determines the bit.

Bit error rate (BER)

The number of bit errors in a sample divided by the total number of bits in the sample, generally averaged over many such samples.

Blind transmission

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

Border inspection-Risk management

The systematic application of management procedures and practices which provide border inspection agencies with the necessary information to address movements or consignments which represent a risk.

Border integrity

The enforcement, by a State, of its laws and/or regulations concerning the movement of goods and/or persons across its borders.

Brake horsepower

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

Briefing

Oral commentary on existing and/or expected meteorological conditions.

Broadband noise

Noise for which the frequency spectrum is continuous (i.e. energy is present at all frequencies in a given range) and which lacks any discrete frequency components (i.e. tones).

Broadcast

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

Burst

A time-defined, contiguous set of one or more related signal units which may convey user information and protocols, signaling, and any necessary preamble.

Burst profile

Set of parameters that describe the uplink or downlink transmission properties associated with an interval usage code. Each profile contains parameters such as modulation type, forward error correction (FEC) type, preamble length, guard times, etc.

Bypass ratio

The ratio of the air mass flow through the bypass 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.

C2 Link

The data link between the remotely piloted aircraft and the remote pilot station for the purposes of managing

the flight.

Applicable as of 26 November 2026.

Cabin crew member

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

Calendar

Discrete temporal reference system that provides the basis for defining temporal position to a resolution of one day (ISO 19108, Geographic information on Temporal schema).

Calibrated Airspeed (CAS)

The calibrated airspeed is equal to the airspeed indicator reading corrected for position and instrument error. (As a result of the sea level adiabatic compressible flow correction to the airspeed instrument dial, CAS is equal to the true airspeed (TAS) in Standard Atmosphere at sea level.)

Calibration check frequency

In hertz, the nominal frequency of the sinusoidal sound pressure signal produced by the sound calibrator.

Calibration gas

A high accuracy reference gas to be used for alignment, adjustment and periodic checks of instruments.

Calibration sound pressure level

In decibels, the sound pressure level produced, under reference environmental conditions, in the cavity of the coupler of the sound calibrator that is used to determine the overall acoustical sensitivity of a measurement system.

Canard

The forward wing of a canard configuration. It may be a fixed, movable, or variable-geometry surface, with or without control surfaces.

Canard configuration

A configuration in which the span of the forward wing is substantially less than that of the main wing.

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.

Canopy

Bare Earth supplemented by vegetation height.

Capability report

Information identifying whether the transponder has a data link capability as reported in the capability (CA) field of an all-call reply or squitter transmission (see “data link capability report”).

Cape Town Protocol

The Protocol to the Convention on International Interests in Mobile Equipment on Matters Specific to Aircraft Equipment.

Capstone inspection module

A component of a training program that involves performing a complex task using concepts and techniques that span several topic areas.

Cargo

Any property carried on an aircraft other than mail and accompanied or mishandled baggage.

Note 1— This definition differs from the definition of “cargo” given in the ICAO Annex 9 — Facilitation

Note 2— COMAT that meets the classification criteria of dangerous goods and which is transported i accordance with Part 1;2.2.2 or Part 1;2.2.3 or Part 1;2.2.4 of the ICAO Technical Instructions, Doc 9284 are considered as “cargo” (e.g. aircraft parts such as chemical oxygen generators, fuel control units, fire extinguishers, oils, lubricants, cleaning products).

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.

Catalytic stripper

A catalytic device that removes volatile species through oxidation.

Category A-Helicopter

With respect to helicopters, means a multi-engine helicopter designed with engine and system isolation features specified in Part IVB of the ICAO Annex 8 and capable of operations using take-off and landing data

scheduled under a critical engine failure concept which assures adequate designated surface area and adequate performance capability for continued safe flight or safe rejected take-off.

Category B-Helicopter

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

Category I operations

A straight-in approach to the runway of an aerodrome under a Category I instrument approach procedure. Category I approaches include a decision height not lower than 200 ft (60 m) and either a visibility not less than 800 m or a runway visual range not less than 550 m.

Category II operations

A straight-in approach to the runway of an aerodrome under a Category II instrument approach procedure. Category II approaches include a decision height lower than 200 ft (60 m), but not lower than 100 ft (30 m), and a runway visual range not less than 350 m.

Category III operations

An approach to, and landing on, the runway of an aerodrome using a Category III instrument approach procedure. Category III operations may be further classified as follows:

a)Category IIIa operations means an approach and landing with no decision height (DH), or a DH below 100 ft (30 m), and controlling runway visual range not less than 700 ft (200m).

b)Category IIIb operations means an approach and landing with no DH, or with a DH below 50 ft (15 m), and controlling runway visual range less than 700 ft (200 m), but not less than 150 ft (50m).

c)Category IIIc operations means an approach and landing with no DH and no runway visual range limitation.

Causes

Actions, omissions, events, conditions, or a combination thereof, which led to the accident or incident. The identification of causes does not imply the assignment of fault or the determination of administrative, civil or criminal liability.

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.

Celsius temperature (t°C)

The Celsius temperature is equal to the difference t°C = T – T0 between two thermodynamic temperatures T and T0 where T0 equals 273.15 kelvin.

Certification

A formal evaluation and confirmation by or on behalf of the appropriate authority for aviation security that a person possesses the necessary competencies to perform assigned functions to an acceptable level as defined by the appropriate authority.

Certified aerodrome

An aerodrome whose operator has been granted an aerodrome certificate.

Certify as airworthy (to)

To certify that an aircraft or parts thereof comply with current airworthiness requirements after maintenance has been performed on the aircraft or parts thereof.

Change-over point

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

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

Channel - Communication

A single means of direct fixed service communication between two points.

Channel of standard accuracy (CSA)

The specified level of positioning, velocity and timing accuracy that is available to user on a continuous, worldwide basis.

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

Check pilot (airplane)

A person who is qualified, and permitted, to conduct flight checks or instruction in an airplane or in a flight simulation training device (FSTD) for a particular airplane type.

Check pilot (simulator)

A person who is qualified to conduct flight checks or instruction, but only in a flight simulation training device (FSTD) for a particular airplane type.

Chip - GNSS

A single digital bit of the output of a pseudo-random bit sequence.

C_{HR}

Reference speed of sound at the altitude of the airplane. The reference speed of sound corresponding to the ambient temperature – assuming a lapse rate of 0.65°C per 100 m – for a standard day at the airplane reference height above mean sea level.

Circuit - Communication

A communication system which includes all the direct AFTN channels between two points.

Circuit mode

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

Citizen of the Kingdom of Saudi Arabia

one of the following:

a) An individual who is of Saudi nationality;

b) A partnership where each partner is an individual who is of Saudi nationality; or

c) An entity organized under the laws of the Kingdom of Saudi Arabia, of which the primary executive officer and at least two-thirds of the board of directors and other managing officers are of Saudi nationality, which is under the actual control of citizens of the Kingdom of Saudi Arabia, and in which at least 51 percent of the voting interest is owned or controlled by persons that are of Saudi nationality.

Civil aircraft

Aircraft other than state or military aircraft.

Civil Aviation Authority

A governmental body with the authority to oversee civil aviation affairs of a particular state.

Civil aviation inspector

A civil aviation inspector is an individual, designated by a Contracting State, who is charged with the inspection of the safety, security or related aspects of air transport operations as directed by the appropriate authority.

Note— Examples of civil aviation inspectors include inspectors responsible for airworthiness, fligh operations and other safety-related aspects, and security-related aspects, of air transport operations.

Class

a)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

b)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, andseaplane.

Clearance limit

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

Clearance of goods

The accomplishment of the customs formalities necessary to allow goods to enter home use, to be exported or to be placed under another customs procedure.

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 airplane may make a portion of its initial climb to a specified height.

Climb out speed

With respect to rotorcraft, a referenced airspeed that results in a flight path clear of the height-velocity envelope during initial climb out.

Climb phase

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

Climb RA

A positive RA recommending a climb but not an increased climb.

Close-out

A command from a Mode S interrogator that terminates a Mode S link layer communication transaction.

Closest approach

The occurrence of minimum range between own ACAS aircraft and the intruder. Thus range at closest approach is the smallest range between the two aircraft and time of closest approach is the time at which this occurs.

Cloud of operational significance

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

Cluster of interrogators

Two or more interrogators with the same interrogator identifier (II) code, operating cooperatively to ensure that there is no interference to the required surveillance and data link performance of each of the interrogators, in areas of common coverage.

Cockpit crew zone

The part of the cabin that is exclusively designated for flight crew use.

Code share

A practice by which one air operator or foreign air carrier permits a second air operator or foreign air carrier to use its airline designator code on a flight, or by which both operators or foreign air carriers share the same airline code on a flight.

Coded chip

A “1” or “0” output of the rate ½ or ¼ convolutional code encoder.

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.

Collision Avoidance-Encounter

For the purposes of defining the performance of the collision avoidance logic, an encounter consists of two simulated aircraft trajectories. The horizontal coordinates of the aircraft represent the actual position of the aircraft but the vertical coordinate represents an altimeter measurement of altitude.

COMAT

Operator material carried on an operator’s aircraft for the operator’s own purposes.

Combined vision system (CVS)

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

Comm-A

A 112-bit interrogation containing the 56-bit MA message field. This field is used by the uplink standard length message (SLM) and broadcast protocols.

Command and control (C2) link

The data link between the remotely piloted aircraft and the remote pilot station for the purposes of managing the flight.

Applicable until 25 November 2026.

Comm-B

A 112-bit reply containing the 56-bit MB message field. This field is used by the downlink SLM, ground-initiated and broadcast protocols.

Comm-C

A 112-bit interrogation containing the 80-bit MC message field. This field is used by the uplink extended length message (ELM) protocol.

Comm-D

A 112-bit reply containing the 80-bit MD message field. This field is used by the downlink ELM protocol.

Commencement of journey

The point at which the person began his journey, without taking into account any airport at which he stopped in direct transit, either on a through-flight or a connecting flight, if he did not leave the direct transit area of the airport in question.

Commercial air transport operation

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

Commercial operator

A person who engages in the commercial air transportation.

Commercial part

An article that is listed on a U.S. Federal Aviation Administration (FAA) approved or GACA-approved commercial parts list included in a design approval holder's instructions for continued airworthiness.

Commissary supplies

Items, either disposable or intended for multiple use, that are used by the aircraft operator for provision of services during flights, in particular for catering, and for the comfort of passengers.

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.

Note— All aircraft of an international operating agency which are registered on other than a nationa basis will bear the same common mark.

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 center

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

Commuter category airplane

An airplane type certificated under GACAR Part 21 to the airworthiness standards of commuter category airplanes as prescribed in GACAR Part 23.

Compatibility study

A study undertaken by the aerodrome operator to address the impact of introducing an airplane type/model new to the aerodrome. A compatibility study may include one or several safety assessments.

Competency

A dimension of human performance that is used to reliably predict successful performance on the job. Acompetency is manifested and observed through behaviours that mobilize the relevant knowledge, skills and attitudes to carry out activities or tasks under specified conditions.

Competency standard

A level of performance that is defined as acceptable when assessing whether or not competency has been achieved.

Competency-based training and assessment

Training and assessment that are characterized by a performance orientation, emphasis on standards of performance and their measurement, and the development of training to the specified performance standards.

Competent laboratory

A testing and calibration laboratory which establishes, implements and maintains a quality system appropriate to the scope of its activities, in compliance with ISO/IEC 17025:2005, as amended from time to time, or equivalent standard and for which the programme for calibration of equipment is designed and operated so as to ensure that calibrations and measurements made by the laboratory are traceable to the International System of Units (SI). Formal accreditation of the laboratory to ISO/IEC 17025:2005 is not required.

Complex airplane

An airplane that has a retractable landing gear, flaps, and a controllable pitch propeller, including airplanes equipped with an engine control system consisting of a digital computer and associated accessories for controlling the engine and propeller, such as a full authority digital engine control; or, in the case of a seaplane, flaps and a controllable pitch propeller, including seaplanes equipped with an engine control system consisting of a digital computer and associated accessories for controlling the engine and propeller, such as a full authority digital engine control.

Conditional sales contract

a)For the sale of an aircraft, aircraft engine, propeller, appliance, or spare part under which the buyer takes possession of the property but title to the property vests in the buyer at a later time on—

(1)Paying any part of the purchaseprice;

(2)Performing another condition; or

(3)The happening of a contingency.

b)To have physical possession of or lease an aircraft, aircraft engine, propeller, appliance, or spare part, under which the third party in physical possession or lessee—

(1)Agrees to pay an amount substantially equal to the value of the property and

(2)Is to become, or has the option of becoming, the owner of the property on complying with the contract.

Conditions

Anything that may qualify a specific environment in which performance will be demonstrated.

Conference communications

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

Confidence level

The probability that the true value of a parameter is within a certain interval around the estimate of its value.

Note— Also referred to as "accuracy of the estimate".

Configuration (as applied to the airplane)

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 airplane.

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, Maintenance and Procedures (CMP)

A document approved by the GACA that contains minimum configuration, operating, and maintenance requirements, hardware life limits, and Master Minimum Equipment List (MMEL) constraints necessary for an airplane-engine combination to meet ETOPS type design approval requirements.

Congested area

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

Congested hostile environment

A hostile environment within a congested area.

Connection

A logical association between peer-level entities in a communication system.

Connection establishment delay

Connection establishment delay, as defined in ISO 8348, includes a component, attributable to the called subnetwork (SN) service user, which is the time between the SN-CONNECT indication and the SN-CONNECT response. This user component is due to actions outside the boundaries of the satellite subnetwork and is therefore excluded from the AMS(R)S specifications.

Consensus standard

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

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.

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.

Contact tracing

Contact tracing is the practice of identifying, notifying, and monitoring individuals who may have had close contact with or who have been exposed to, and possibly infected by, a person having a confirmed or probable case of an infectious disease as a means of controlling the spread of infection. The confirmed or potentially infected person's identity is not discussed with contacts, even if asked.

Contaminated runway

A runway is contaminated when a significant portion of the runway surface area (whether in isolated areas or not) within the length and width being used is covered by one or more of the substances listed in the runway surface condition descriptors.

Note— Further information on runway surface condition descriptors can be found in the ICAO Annex 14 Volume I — Definitions.

Continuing airworthiness

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

Continuing airworthiness records

Records which are related to the continuing airworthiness status of an aircraft, engine, propeller or associated part.

Continuing Analysis and Surveillance System (CASS)

Continuing Analysis and Surveillance System (CASS) - A system that air operators use to monitor, analyze, and optimize the performance and effectiveness of their air operator maintenance and inspection programs for the purpose of correcting any deficiencies in those programs.

Continuous Airworthiness Maintenance Program

CAMP - A comprehensive maintenance and preventive maintenance system used by air operators that collectively and systematically serves to ensure each aircraft has been properly maintained for commercial operations and is airworthy. The CAMP includes the following 10 elements:

(1) Airworthiness responsibility,

(2) Air operator maintenance manual,

(3) Air operator maintenance organization,

(4) Accomplishment and approval of maintenance and alterations,

(5) Aircraft maintenance schedules,

(6) Required Inspection Items,

(7) Maintenance recordkeeping system,

(8) Contract maintenance,

(9) Personnel training, and

(10) Continuing Analysis and Surveillance System (CASS).

Continuous descent final approach (CDFA)

A technique, consistent with stabilized approach procedures, for flying the final approach segment (FAS) of aninstrument non-precision approach (NPA) procedure as a continuous descent, without level-off, from an altitude/height at or above the final approach fix altitude/height to a point approximately 15 m (50 ft) above thelanding runway threshold or the point where the flare maneuver begins for the type of aircraft flown; for the FASof an NPA procedure followed by a circling approach, the CDFA technique applies until circling approach minima(circling OCA/H) or visual flight maneuver altitude/height are reached.

Contour line

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

Contributing factors

Actions, omissions, events, conditions, or a combination thereof, which, if eliminated, avoided or absent, would have reduced the probability of the accident or incident occurring, or mitigated the severity of the consequences of the accident or incident. The identification of contributing factors does not imply the assignment of fault or the determination of administrative, civil or criminal liability.

Control area

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

Control area (CTA)

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

Control motion noise (CMN)

That portion of the guidance signal error which causes control surface, wheel and column motion and could affect aircraft attitude angle during coupled flight, but does not cause aircraft displacement from the desired course and/or glide path.

Control zone

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

Controlled aerodrome

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

Note— The term "controlled aerodrome" indicates that air traffic control service is provided t aerodrome traffic but does not necessarily imply that a control zone exists.

Controlled airspace

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

Note— Controlled airspace is a generic term which covers ATS airspace Classes A, B, C, D and E a described in 2.6.

Controlled flight

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

Controller- Non-duty period

A continuous and defined period of time, subsequent to and/or prior to duty periods, during which the air traffic controller is free of all duties.

Controller-duty

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

Controller-Duty period

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

Controller-pilot data link communications (CPDLC)

A means of communication between controller and pilot, using data link for ATC communications.

Controller-Time in position

The period of time when an air traffic controller is exercising the privileges of the air traffic controller's license at an operational position.

Conveyance

A written instrument, including a conditional sales contract, affecting title to, or interest in, property.

Convolutional turbo codes (CTC)

Type of forward error correction (FEC) code.

Coordination interrogation

A Mode S interrogation (uplink transmission) radiated by ACAS II or III and containing a resolution message.

Coordination reply

A Mode S reply (downlink transmission) acknowledging the receipt of a coordination interrogation by the Mode S transponder that is part of an ACAS II or III installation.

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.

Note— also referred to as Second-In-Command (SIC).

Core curriculum

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

Core satellite constellation(s)

The core satellite constellations are GPS and GLONASS.

Corporate aviation

The non-commercial operation or use of aircraft by a company for the carriage of passengers or goods as an aid to the conduct of company business, flown by a professional pilot employed to fly the aircraft.

Note— that corporate aviation is a subset of general aviation.

Corporate aviation operation

The non-commercial operation or use of aircraft by a company for the carriage of passengers or goods as an aid to the conduct of company business, flown by a professional pilot(s) employed to fly the aircraft

Corrective RA

A resolution advisory that advises the pilot to deviate from the current flight path.

Coulomb (C)

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

Course

For purposes of airman training—

a) A program of instruction to obtain airman certification, qualification, authorization, or currency;or

b) A program of instruction to meet specified requirements of a program for airman training, certification, qualification, authorization, or currency.

Course line

The locus of points nearest to the runway center line in any horizontal plane at which the DDM is zero.

Course sector

A sector in a horizontal plane containing the course line and limited by the loci of points nearest to the course line at which the DDM is 0.155.

Courseware

Instructional material developed for each course or curriculum, including lesson plans, flight event descriptions, computer software programs, audiovisual programs, workbooks, and handouts.

CPDLC message

Information exchanged between an airborne system and its ground counterpart. A CPDLC message consists of a single message element or a combination of message elements conveyed in a single transmission by the initiator.

CPDLC message set

A list of standard message elements and free text message elements.

Credit

Recognition of alternative means or prior qualifications.

C_R

Reference speed of sound. Speed of sound at a reference temperature conditions (25ºC).

Crew member

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

Crew-duty

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

Crew-Duty period

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

Crew-Positioning

a) The transportation of that crew member as a passenger or non-operating crew member, by any mode of transportation, as required by a certificate holder, excluding transportation to or from a suitable accommodation; and

b) With respect to an aircraft, any operation, the primary purpose of which is the relocation of the aircraft, and during which any carriage of passengers or cargo is incidental. Any operation in which passengers or cargo are carried for compensation or hire does not constitute positioning.

Critical airplane

The type of airplane which is the most demanding for the relevant elements of the physical infrastructure and the facilities for which the aerodrome is intended.

Critical altitude

The maximum altitude at which, in standard atmosphere, it is possible to maintain a specified power or a specified manifold pressure at a specified rotational speed. Unless otherwise stated, the critical altitude is the maximum altitude at which it is possible to maintain one of the following at the maximum continuous rotational speed:

a) With respect to engines for which this power rating is the same at sea level and at the rated altitude, the maximum continuous power.

b) With respect to engines for which the maximum continuous power rating is governed by a constant manifold pressure, the maximum continuous rated manifold pressure.

Critical engine(s)

Any engine whose failure gives the most adverse effect on the aircraft characteristics relative to the case under consideration.

Note— On some aircraft there may be more than one equally critical engine. In such case, the expressio "the critical engine" means one of those critical engines.

Cross-country

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

Cross-country time

For purposes of GACAR Parts 61 and 141—

a) Time acquired during flight—

(1) Conducted by a person who holds a pilot certificate;

(2) Conducted in an aircraft;

(3) That includes a landing at a point other than the point of departure; and

(4) That involves the use of dead reckoning, pilotage, electronic navigation aids, radio aids, or other navigation systems to navigate to the landing point.

b) For the purpose of meeting the aeronautical experience requirements (except for a rotorcraft category rating) for a private pilot certificate (except for a powered parachute category rating), a commercial pilot certificate, or an instrument rating, time acquired during a flight—

(1) Conducted in an appropriate aircraft;

(2) That includes a point of landing that was at least a straight-line distance of more than 50 NM from the original point of departure; and

(3) That involves the use of dead reckoning, pilotage, electronic navigation aids, radio aids, or other navigation systems to navigate to the landing point.

c) For the purpose of meeting the aeronautical experience requirements for a sport pilot certificate (except for powered parachute privileges), time acquired during a flight conducted in an appropriate aircraft that—

(1) Includes a point of landing at least a straight-line distance of more than 25 NM from the original point of departure, and

(2) Involves, as applicable, the use of dead reckoning, pilotage, electronic navigation aids, radio aids, or other navigation systems to navigate to the landing point.

d) For the purpose of meeting the aeronautical experience requirements for a sport pilot certificate with powered parachute privileges or a private pilot certificate with a powered parachute category rating, time acquired during a flight conducted in an appropriate aircraft that—

(1) Includes a point of landing at least a straight-line distance of more than 15 NM from the original point of departure, and

(2) Involves, as applicable, the use of dead reckoning, pilotage, electronic navigation aids, radio aids, or other navigation systems to navigate to the landing point.

e) For the purpose of meeting the aeronautical experience requirements for any pilot certificate with a rotorcraft category rating or an instrument-helicopter rating, time acquired during a flight—

(1) Conducted in an appropriate aircraft;

(2) That includes a point of landing that was at least a straight-line distance of more than 25 NM from the original point of departure; and

(3) That involves the use of dead reckoning, pilotage, electronic navigation aids, radio aids, or other navigation systems to navigate to the landing point.

f) For the purpose of meeting the aeronautical experience requirements for an airline transport pilot (ATP)

certificate (except with a rotorcraft category rating), time acquired during a flight—

(1) Conducted in an appropriate aircraft;

(2) That is at least a straight-line distance of more than 50 NM from the original point of departure; and

(3) That involves the use of dead reckoning, pilotage, electronic navigation aids, radio aids, or other navigation systems.

g) For a military pilot who qualifies for a commercial pilot certificate (except with a rotorcraft category rating) under GACAR § 61.93, time acquired during a flight—

(1) Conducted in an appropriate aircraft;

(2) That is at least a straight-line distance of more than 50 NM from the original point of departure; and

(3)That involves the use of dead reckoning, pilotage, electronic navigation aids, radio aids, or other navigation systems.

Other than for purposes of GACAR Parts 61 and 141, time acquired during flight—

a) Conducted by a person who holds a pilot certificate;

b) Conducted in an aircraft;

c) That includes a landing at a point other than the point of departure; and

d) That involves the use of dead reckoning, pilotage, electronic navigation aids, radio aids, or other navigation systems to navigate to the landing point.

Crossing encounter

An encounter in which the altitude separation of the two aircraft exceeds 100 ft at the beginning and at the end of the encounter window, and the relative vertical position of two aircraft at the end of the encounter window is reversed from that at the beginning of the encounter window.

Cruise climb

An airplane cruising technique resulting in a net increase in altitude as the airplane mass decreases.

Cruise relief pilot

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

Cruising level

A level maintained during a significant portion of a flight.

Culture (Aeronautical Chart)

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

Current data authority

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

Current flight plan

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

Current slot

The slot in which a received transmission begins.

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.

Cyclone separator

Separation of particles larger than a prescribed aerodynamic diameter via rotational and gravitational means. The specified cut-point aerodynamic diameter is associated with the percent of particles that penetrate through the cyclone separator.

Damage tolerance (DT) data

Damage tolerance evaluation (DTE) documentation and the associated damage tolerance inspection (DTI) documentation.

Damage tolerance evaluation (DTE)

A process that leads to a determination of maintenance actions necessary to detect or preclude fatigue cracking that could contribute to a catastrophic failure. As applied to repairs and alterations, a DTE includes the evaluation both of the repair or alteration and of the fatigue critical structure affected by the repair or alteration.

Damage tolerance evaluation (DTE) documentation

Data that identify the evaluated fatigue critical structure, the basic assumptions applied in a DTE, and the results of a DTE.

Damage tolerance inspection (DTI)

The inspection developed as a result of a damage tolerance evaluation (DTE). A DTI includes the areas to be inspected, the inspection method, the inspection procedures including acceptance and rejection criteria, the threshold, and any repeat intervals associated with those inspections. The DTI may specify a time limit within which a repair or alteration needs to be replaced or modified. If the DTE concludes that damage tolerance-based supplemental structural inspections are not necessary, the DTI documentation contains a

statement to that effect.

Damage tolerance inspection (DTI) documentation

A document specifying the parameters and procedures for performance of a DTI.

Danger area

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

Dangerous goods

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

Note— Dangerous goods are classified in the ICAO Annex 18, Chapter 3.

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 major property or environmental 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 or environmental 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.

Dangerous goods label

A visual symbol specified in the Technical Instructions that communicates the class (Classes 1 through 9) and any required handling instructions for a dangerous good.

Dangerous goods marking

Text containing the shipping name of the dangerous good together with its United Nations (UN) number, if any.

Dangerous Goods Preparer Certificate (DGPC)

A certificate issued by the President to a person that prepares dangerous goods for transport by air on its own behalf or on behalf of a non-certificated shipper.

Dangerous Goods Transport Authorization (DGTA)

An authorization issued by the President to an operator that permits the transport of dangerous goods by air.

Dangerous goods transport document

A document specified by Part 5, Chapter 4 of the ICAO Technical Instructions for The Safe Transport of Dangerous Goods by Air (Doc 9284). It is completed by the person who offers dangerous goods for transport by air and contains information about the shipper, the recipient, and the dangerous goods.

Dangerous Goods-Acceptance checklist

A document used to assist in carrying out a check on the external appearance of packages of dangerous goods and their associated documents to determine that all appropriate requirements have been met.

Data accuracy

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

Data circuit-terminating equipment (DCE)

A DCE is a network provider equipment used to facilitate communications between DTEs.

Data completeness

The degree of confidence that all of the data needed to support the intended use is provided.

Data format

A structure of data elements, records and files arranged to meet standards, specifications or data quality requirements.

Data integrity (assurance level)

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

Data link capability report

Information in a Comm-B reply identifying the complete Mode S communications capabilities of the aircraft installation.

Data link communications

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

Data link entity (DLE)

A protocol state machine capable of setting up and managing a single data link connection.

Data link flight information services (D-FIS)

The provision of FIS via data link.

Data link initiation capability (DLIC)

A data link application that provides the ability to exchange addresses, names and version numbers necessary to initiate data link applications (see ICAO Doc 4444).

Data link service (DLS) sublayer

The sublayer that resides above the MAC sublayer. For VDL Mode 4, the DLS sublayer resides above the VSS sublayer. The DLS manages the transmit queue, creates and destroys DLEs for connection oriented communications, provides facilities for the LME to manage the DLS, and provides facilities for connectionless communications.

Data link-automatic terminal information service (D-ATIS)

The provision of ATIS via data link.

Data product

Data set or data set series that conforms to a data product specification (*ISO 19131, Geographic information on 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 (ISO 19131, *Geographic information on Data product specification*).

Note— A data product specification provides a description of the universe of discourse and a specification for mapping the universe of discourse to a data set. It may be used for production, sales, end-use or other purpose.

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 (or equivalent assurance level), traceability, timeliness, completeness and format.

Data resolution

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

Data set

Identifiable collection of data (*ISO 19101, Geographic information on Reference model*).

Data set series

Collection of data sets sharing the same product specification (ISO 19115, Geographic information on Metadata).

Data signaling rate

Data signaling rate refers to the passage of information per unit of time, and is expressed in bits/second. Data signaling rate is given by the formula:

$$\sum_{i=1}^{i=m} \frac{1}{T_i} \log_2 n_i$$

where m is the number of parallel channels, T_i is the minimum interval for the $_i$th channel expressed in seconds, ni is the number of significant conditions of the modulation in the $_i$th channel.

Note 1— a) For a single channel (serial transmission) it reduces to (1/T)log2n; with a two-condition modulation (n = 2), it is 1/T. b) For a parallel transmission with equal minimum intervals and equal number of significant conditions on each channel, it is m(1/T)log2n (m(1/T) in case of a two-condition modulation).

Note 2— In the above definition, the term "parallel channels" is interpreted to mean: channels, each c which carries an integral part of an information unit, e.g. the parallel transmission of bits forming a character. In the case of a circuit comprising a number of channels, each of which carries information "independently", with the sole purpose of increasing the traffic handling capacity, these channels are not to be regarded as parallel channels in the context of this definition.

Data terminal equipment (DTE)

A DTE is an endpoint of a subnetwork connection.

Data timeliness

The degree of confidence that the data is applicable to the period of its intended use.

Data traceability

The degree that a system or a data product can provide a record of the changes made to that product and thereby enable an audit trail to be followed from the end-user to the originator.

Data transfer delay (95th percentile)

The 95th percentile of the statistical distribution of delays for which transit delay is the average.

Data transit delay

In accordance with ISO 8348, the average value of the statistical distribution of data delays. This delay

represents the subnetwork delay and does not include the connection establishment delay.

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 (ISO 19104, Geographic information on Terminology).

DDM — Difference in depth of modulation

The percentage modulation depth of the larger signal minus the percentage modulation depth of the smaller signal, divided by 100.

Displacement sensitivity-ILS (localizer)

The ratio of measured DDM to the corresponding lateral displacement from the appropriate referenceline.

Deadhead transportation

Transportation of a flight crew member as a passenger or non-operating flight crew member, by any mode of transportation, as required by a certificate holder, excluding transportation to or from a suitable accommodation. All time spent in deadhead transportation is duty and is not rest. For purposes of determining the maximum flight duty period in Table B of GACAR Part 117, deadhead transportation is not considered a flight segment.

Decision altitude (DA) or decision height (DH)

A specified altitude or height in a 3D instrument approach operation at which a missed approach must be initiated if the required visual reference to continue the approach has not been established.

Note 1— Decision altitude (DA) is referenced to mean sea level and decision height (DH) is referenced t the threshold elevation.

Note 2— The required visual reference means that section of the visual aids or of the approach area whic should have been in view for sufficient time for the pilot to have made an assessment of the aircraft position and rate of change of position, in relation to the desired flight path. In Category III operations with a decision height the required visual reference is that specified for the particular procedure and operation.

Note 3— For convenience where both expressions are used they may be written in the form "decisio altitude/height" and abbreviated "DA/H".

Declarant

Any person who makes a goods declaration or in whose name such a declaration is made.

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 airplane takingoff.

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 airplane landing.

Declared distances — heliports

a) Take-off distance available (TODAH). The length of the FATO 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 FATO declared available and suitable for helicopters operated in performance class 1 to complete a rejected take-off.

c) Landing distance available (LDAH). The length of the FATO plus any additional area declared available and suitable for helicopters to complete the landing maneuver from a defined height.

Declared temperature

A temperature selected in such a way that when used for performance purposes, over a series of operations, the average level of safety is not less than would be obtained by using official forecast temperatures.

Defense area

Any airspace of the Kingdom of Saudi Arabia that is not an air defense identification zone (ADIZ) in which the control of aircraft is required for reasons of national security.

Defined point after take-off (DPATO)

The point, within the take-off and initial climb phase, before which the helicopter’s ability to continue the flight safely, with one engine inoperative, is not assured and a forced landing may be required.

Note— Defined points apply to helicopters operating in performance Class 2 only.

Defined point before landing (DPBL)

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

Note— Defined points apply to helicopters operating in performance Class 2 only.

Degree Celsius (°C)

The special name for the unit kelvin for use in stating values of Celsius temperature.

Degree of standardized test distortion

The degree of distortion of the restitution measured during a specific period of time when the modulation is perfect and corresponds to a specific text.

De-icing/anti-icing facility

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

Note— Further guidance is given in the Manual of Aircraft Ground De-icing/Anti-icing Operations (Do 9640).

De-icing/anti-icing pad

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

Deleterious effects

Effects that are capable of posing a hazard to the health of passengers, personnel, live cargo or on the structure of the aircraft.

Dependent parallel approaches

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

Deportation order

A written order, issued by the competent authorities of a State and served upon a deportee, directing him to leave that State.

Deportee

A person who had legally been admitted to a State by its authorities or who had entered a State illegally, and who at some later time is formally ordered by the competent authorities to leave that State.

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.

Note— Attention is drawn to the difference between the definition of "derived version of an airplane" i Volume I of the ICAO Annex 16 and the definition of "derivative version" given in the Volume II.

Derived version of a CO2-certified airplane

An airplane which incorporates a change in the type design that either increases its maximum take-off mass, or that increases its CO2 emissions evaluation metric value by more than:

a) 1.35 per cent at a maximum take-off mass of 5 700 kg, decreasing linearly to;

b) 0.75 per cent at a maximum take-off mass of 60 000 kg, decreasing linearly to;

c) 0.70 per cent at a maximum take-off mass of 600 000 kg; and

d) a constant 0.70 per cent at maximum take-off masses greater than 600 000 kg.

Note— In some States, where the certificating authority finds that the proposed change in design configuration, power or mass is so extensive that a substantially complete investigation of compliance with the applicable airworthiness regulations is required, the airplane requires a new Type Certificate.

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.

Note 1 — In applying the Standards stipulated in the GACAR, a helicopter that is based on an existing prototype but which is considered by the certificating authority to be a new type design for airworthiness purposes shall nevertheless be considered as a derived version if the noise source characteristics are judged by the certificating authority to be the same as the prototype.

Note 2— "Adversely" refers to an increase of more than 0.30 EPNdB in any one of the noise certificatio levels for helicopters certificated according to the ICAO Annex 16, Volume 1, Chapter 8 and 0.30 dB(A) in the certification level for helicopters certificated according to Chapter 11.

Derived version of a non-CO2-certified airplane

An individual airplane that conforms to an existing Type Certificate, but which is not certified to ICAO Annex 16, Volume III, and to which a change in the type design is made prior to the issuance of the airplane's first certificate of airworthiness that increases its CO2 emissions evaluation metric value by more than 1.5 per cent or is considered to be a significant CO2 change.

Derived version of an airplane

An airplane 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.

Note 1— Where the certificating authority finds that the proposed change in design, configuration, powe or mass is so extensive that a substantially new investigation of compliance with the applicable airworthiness regulations is required, the airplane should be considered to be a new type design rather

than a derived version.

Note 2— "Adversely" refers to an increase of more than 0.10 dB in any one of the noise certification level unless the cumulative effects of changes in type design are tracked by an approved procedure in which case "adversely" refers to a cumulative increase in the noise level in any one of the noise certification levels of more than 0.30 dB or the margin of compliance, whichever is smaller.

Descend RA

A positive RA recommending a descent but not an increased descent.

Design D

The D of the design helicopter.

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.

Designated operational coverage (DOC) area

The area in which a particular service is provided and in which the service is afforded frequency protection.

Note— This area may, after proper coordination to ensure frequency protection, extend to areas outside the allotment areas contained in Appendix S27 to the Radio Regulations.

Designated postal operator

Any governmental or non-governmental entity officially designated by a Universal Postal Union (UPU) member country to operate postal services and to fulfil the related obligations arising from the acts of the UPU Convention on its territory.

Detect and avoid

The capability to see, sense or detect conflicting traffic or other hazards and take the appropriate action.

DETRESFA

The code word used to designate a distress phase.

Differences training

The training required for crew members and dispatchers who have qualified and served with respect to a particular type aircraft, when the President finds additional training is necessary before a crew member or dispatcher, as appropriate, serves in the same capacity with respect to another variation of that aircraft.

Digital Elevation Model (DEM)

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

Note— Also referred to as "Digital Terrain Model (DTM)".

Direct link service (DLS)

A data communications service which makes no attempt to automatically correct errors, detected or undetected, at the link layer of the air-ground communications path. (Error control may be effected by end-user systems.)

Direct transit area

A special area established in an international airport, approved by the public authorities concerned and under their direct supervision or control, where passengers can stay during transit or transfer without applying for entry to the State.

Direct transit arrangements

Special arrangements approved by the public authorities concerned by which traffic which is pausing briefly in its passage through the Contracting State may remain under their direct control.

Directly in charge

Having the responsibility for the work of a maintenance organization that performs maintenance, preventive maintenance, alterations, or other functions affecting aircraft airworthiness. A person who is “directly in charge” need not physically observe and direct each worker constantly but must be readily available for consultation on matters requiring instruction or decision from higher authority than that of the persons performing the work.

Directory service (DIR)

A service, based on the ITU-T X.500 series of recommendations, providing access to and management of structured information relevant to the operation of the ATN and its users.

Discrete source damage

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

Disembarkation

The leaving of an aircraft after a landing, except by crew or passengers continuing on the next stage of the same through-flight.

Disinfection

The procedure whereby health measures are taken to control or kill infectious agents on a human or animal body, in or on affected parts of aircraft, baggage, cargo, goods or containers, as required, by direct exposure to chemical or physical agents.

Disinsection

The procedure whereby health measures are taken to control or kill insects present in aircraft, baggage, cargo, containers, goods and mail.

Displaced threshold

A threshold not located at the extremity of a runway.

Disruptive passenger

A passenger who fails to respect the rules of conduct at an airport or on board an aircraft or to follow the instructions of the airport staff or crew members and thereby disturbs the good order and discipline at an airport or on board the aircraft.

Distress phase

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

Ditching

The forced landing of an aircraft on water.

DME dead time

A period immediately following the decoding of a valid interrogation during which a received interrogation will not cause a reply to be generated.

Note— Dead time is intended to prevent the transponder from replying to echoes resulting from multipatheffects.

DME Interrogator-Track

The condition which exists when the DME interrogator has locked onto replies in response to its own interrogations, and is continuously providing a distance measurement.

DME/N

Distance measuring equipment, primarily serving operational needs of en-route or TMA navigation, where the “N” stands for narrow spectrum characteristics.

DME/P

The distance measuring element of the MLS, where the “P” stands for precise distance measurement. The spectrum characteristics are those of DME/N.

Domain

A set of end systems and intermediate systems that operate according to the same routing procedures and that is wholly contained within a single administrative domain.

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.

Note— also referred to as "cross-band".

Downlink

A term referring to the transmission of data from an aircraft to the ground. Mode S air-to-ground signals are transmitted on the 1 090 MHz reply frequency channel.

Downlink ELM (DELM)

A term referring to extended length downlink communication by means of 112-bit Mode S Comm-D replies, each containing the 80-bit Comm-D message field (MD).

Downstream clearance

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

Dry runway

A runway is considered dry if its surface is free of visible moisture and not contaminated within the area intended to be used.

DTE documentation

Data that identify the evaluated fatigue critical structure, the basic assumptions applied in a DTE, and the results of a DTE.

Dual instruction time

Flight time during which a person is receiving flight instruction from a properly authorized pilot on board the aircraft, or from a properly authorized remote pilot using the remote pilot station during a remotely piloted aircraft flight. *Note— 2nd Nov 2022 onwards.*

Duplex

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

During flight

For the purpose of service difficulty reporting requirements, the period from the moment the aircraft leaves the surface of the earth on takeoff until it touches down on landing.

D-value

A limiting dimension, in terms of "D", for a heliport, helideck or shipboard heliport, or for a defined area within.

Dynamic load-bearing surface

A surface capable of supporting the loads generated by a helicopter in motion.

Dynamic side-lobe level - MLS

The level that is exceeded 3 per cent of the time by the scanning antenna far field radiation pattern exclusive of the main beam as measured at the function scan rate using a 26 kHz beam envelope video filter. The 3 per cent level is determined by the ratio of the side-lobe duration which exceeds the specified level to the total scan duration.

Early ETOPS

ETOPS-type design approval obtained without gaining non-ETOPS service experience on the candidate airplane- engine combination certified for ETOPS.

EDTO critical fuel

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

Note— Guidance on EDTO critical fuel scenarios is contained in the Extended Diversion Time Operations Manual (Doc 10085).

EDTO significant system

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

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 coverage

The area surrounding an NDB within which bearings can be obtained with an accuracy sufficient for the nature of the operation concerned.

Effective intensity

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

Effective length of the runway

For purposes of landing, means the distance from the point at which the obstruction clearance plane associated with the approach end of the runway intersects the centerline of the runway to the far end thereof.

Effective margin

That margin of an individual apparatus which could be measured under actual operating conditions.

Effective side-lobe level - MLS

That level of scanning beam side lobe which in a specified multipath environment results in a particular guidance angle error.

Electrical mobility diameter of a particle

The diameter of a sphere that moves with exactly the same mobility in an electrical field as the particle in question. Light absorbing carbon that is not removed from a filter sample heated to 870°C in an inert atmosphere during thermal optical transmittance (TOT) analysis, excluding char.

Electronic aeronautical chart display

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

Electronic flight bag (EFB)

An electronic information system, comprised of equipment and applications for flight crew, which allows for

the storing, updating, displaying and processing of EFB functions to support flight operations or duties.

Electronic signature

An electronic signature acceptable to the President, for a person to validate the contents of an electronic document. Use of an electronic signature is equivalent to the act of signing a physical document.

Electronic Travel Systems (ETS)

The automated process for the lodgement, acceptance and verification of a passenger's authorization to travel to a State, in lieu of the standard counterfoil paper visa.

Elevated heliport

A heliport located on a raised structure on land.

Elevation

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

Ellipsoid height (Geodetic height)

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

Elongated

When used with TLOF or FATO, elongated means an area which has a length more than twice its width.

Embarkation

The boarding of an aircraft for the purpose of commencing a flight, except by such crew or passengers as have embarked on a previous stage of the same through-flight.

Emergency locator transmitter (ELT)

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

Automatic fixed ELT (ELT(AF)). An automatically activated ELT which is permanently attached to an aircraft.

Automatic portable ELT (ELT(AP)). An automatically activated ELT which is rigidly attached to an aircraft but readily removable from the aircraft.

Automatic deployable ELT (ELT(AD)). An ELT which is rigidly attached to an aircraft and which is automatically deployed and activated by impact, and, in some cases, also by hydrostatic sensors. Manual

deployment is also provided.

Survival ELT (ELT(S)). An ELT which is removable from an aircraft, stowed so as to facilitate its ready use in an emergency, and manually activated by survivors.

Emergency phase

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

eMRTD

An MRTD (passport, visa or card) that has a contactless integrated circuit embedded in it and the capability of being used for biometric identification of the MRTD holder in accordance with the standards specified in the relevant Part of Doc 9303 — Machine Readable Travel Documents.

Encounter class

Encounters are classified according to whether or not the aircraft are transitioning at the beginning and end of the encounter window, and whether or not the encounter is crossing.

Encounter window

The time interval [tca – 40 s, tca + 10 s].

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.

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.

Engine

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

Note— Also referred to as "aircraft engine".

Enhanced vision system (EVS)

A system to display electronic real-time images of the external scene achieved through the use of image

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

En-route phase

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

Note— Where adequate obstacle clearance cannot be guaranteed visually, flights must be planned to ensure that obstacles can be cleared by an appropriate margin. In the event of failure of the critical engine, operators may need to adopt alternative procedures.

Entity

A firm, partnership, corporation, company, association, joint-stock association, or governmental entity.

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).

Equivalent isotropically radiated power (EIRP)

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).

Equivalent procedure

A test or analysis procedure which, while differing from the one specified in the volume III of the ICAO Annex 16, in the technical judgement of the certificating authority yields effectively the same CO2 emissions evaluation metric value as the specified procedure.

Error

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

Note— See Chapter 1 of the ICAO Annex 19 — Safety Management for a definition of operational personnel.

Error management

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

Note— See Chapter 6 of Part II, Section I of the Procedures for Air Navigation Services — Training (PANS-TRG, Doc 9868) and Circular 314 — Threat and Error Management (TEM) in Air Traffic Control for a description of undesired states.

Escort

An individual authorized by a Contracting State or an aircraft operator to accompany inadmissible persons

or deportees being removed from that Contracting State.

Essential radio navigation service

A radio navigation service whose disruption has a significant impact on operations in the affected airspace or aerodrome.

Established track

A track generated by ACAS air-air surveillance that is treated as the track of an actual aircraft.

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 Alternate Aerodrome

An adequate aerodrome listed in a certificate holder's operations specifications that is designated in a dispatch or flight release for use in the event of a diversion during the ETOPS portion of the flight. This definition applies only to flight planning, and does not in any way limit the authority of the PIC during flight.

ETOPS Area of Operation

One of the following areas:

a)Fortwo-engineairplanes,anareabeyond60minutesfromanadequateaerodrome,computedusingaone-engine-inoperative cruise speed under standard conditions in stillair.

b)For passenger-carrying airplanes with more than two engines, an area beyond 180 minutes from an adequate aerodrome, computed using a one-engine-inoperative cruise speed under standard conditions in still air.

Note— Also referred to as EDTO Area of operation.

ETOPS Entry Point

The first point on the route of an ETOPS flight that is in the ETOPS Area of Operation.

Evaluator

A person employed by a training center certificated under GACAR Part 142 who is authorized by the President to perform tests for certification, added ratings, authorizations, and proficiency checks, as authorized under the certificate holder's training specification.

Exception

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

Exemption

An authorization, other than an approval, granted by an appropriate national authority providing relief from the provisions of the Technical Instructions.

Exhaust nozzle

In the exhaust emissions sampling of gas turbine engines where the jet effluxes are not mixed (as in some turbofan engines, for example) the nozzle considered is that for the gas generator (core) flow only. Where, however, the jet efflux is mixed the nozzle considered is the total exit nozzle.

Expected-Performance

Used in relation to various aspects of performance (e.g. rate or gradient of climb), this term means the standard performance for the type, in the relevant conditions (e.g. mass, altitude and temperature).

Expected approach time

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

Note— The actual time of leaving the holding fix will depend upon the approach clearance.

Extended diversion time operations (EDTO)

Any operation by an airplane with two or more turbine engines where the diversion time to an en-route alternate aerodrome is greater than the threshold time established by the President.

Note— Also referred to as ETOPS.

Extended flight over water

A flight operated over water at a distance of more than 93 km (50 NM), or 30 minutes at normal cruising speed, whichever is the lesser, away from land suitable for making an emergency landing.

Extended Golay Code

An error correction code capable of correcting multiple bit errors.

Extended hybrid surveillance

The process of using qualified ADS-B airborne position messages via 1 090 MHz extended squitter without validating 1 090 extended squitter data for the track by ACAS active interrogations.

Extended length message (ELM)

A series of Comm-C interrogations (uplink ELM) transmitted without the requirement for intervening replies, or a series of Comm-D replies (downlink ELM) transmitted without intervening interrogations.

Extended range operation

Any flight by an airplane with two or more turbine engines where the flight time at the one or more engines 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 President.

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.

External-load attaching

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.

FAA Oversight Office

The FAA aircraft certification office or office of the FAA Transport Airplane Directorate with oversight responsibility for the relevant type certificate or supplemental type certificate, as determined by the Administrator of the FAA.

Facility availability

The ratio of actual operating time to specified operating time.

Facility failure

Any unanticipated occurrence which gives rise to an operationally significant period during which a facility does not provide service within the specified tolerances.

Facility Performance Category I — ILS

An ILS which provides guidance information from the coverage limit of the ILS to the point at which the localizer course line intersects the ILS glide path at a height of 30 m (100 ft) or less above the horizontal plane containing the threshold.

Note— The lower limit is set to 30 m (100 ft) below the minimum Category I decision height (DH).

Facility Performance Category II — ILS

An ILS which provides guidance information from the coverage limit of the ILS to the point at which the localizer course line intersects the ILS glide path at a height of 15 m (50 ft) or less above the horizontal plane containing the threshold.

Note— The lower limit is set to 15 m (50 ft) below the minimum Category II decision height (DH).

Facility Performance Category III — ILS

An ILS which, with the aid of ancillary equipment where necessary, provides guidance information from the coverage limit of the facility to, and along, the surface of the runway. Front course sector. The course sector which is situated on the same side of the localizer as the runway.

Facility reliability

The probability that the ground installation operates within the specified tolerances.

Note— This definition refers to the probability that the facility will operate for a specified period of time.

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.

Falling Object

For purposes of GACAR Part 105, any item other than a person that descends to the surface from an aircraft in flight when a parachute is used or is intended to be used to slow the object's fall during all or part of the descent.

Fan marker beacon

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

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.

Fatigue

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

Fatigue critical structure

An airplane structure that is susceptible to fatigue cracking that could contribute to a catastrophic failure. Fatigue critical structures include structures, which, if repaired or altered, could be susceptible to fatigue cracking and contribute to a catastrophic failure. Such structures may be part of the baseline structure or part of an alteration.

Fatigue Risk Management System (FRMS)

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

Feature

Abstraction of real world phenomena (ISO 19101, Geographic information on Reference model).

Feature attribute

Characteristic of a feature (ISO 19101, Geographic information on Reference model).

Note— A feature attribute has a name, a data type and a value domain associated with it.

Feature operation

Operation that every instance of a feature type may perform (ISO 19110 Geographic information on Feature cataloguing schema).

Note— An operation upon the feature type dam is to raise the dam. The result of the operation is to rais the level of water in the reservoir.

Feature relationship

Relationship that links instances of one feature type with instances of the same or a different feature type (ISO 19101, Geographic information on Reference model).

Feature type

Class of real world phenomena with common properties (ISO 19110, Geographic information on Feature cataloguing schema).

Note— In a feature catalogue, the basic level of classification is the feature type.

Fictional aerodrome

As used in Subpart B of GACAR Part 60, means a visual model of an aerodrome that is a collection of “non

real world" terrain, instrument approach procedures, navigation aids, maps, and visual modeling detail sufficient to enable completion of an airline transport pilot (ATP) certificate or type rating.

Filed flight plan

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

Final approach

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

a) at the end of the last procedure turn, base turn or inbound turn of a racetrack procedure, if specified;or

b) at the point of interception of the last track specified in the approach procedure; and ends at a point in the vicinity of an aerodrome from which:

1) a landing can be made; or

2) a missed approach procedure is initiated.

Final approach (FA) mode

The condition of DME/P operation which supports flight operations in the final approach and runway regions.

Final approach and take-off area (FATO)

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

Final approach fix or point

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

Final approach segment (FAS)

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

Fire resistant

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

Note— The characteristics of an acceptable flame can be found in ISO 2685.

Fireproof

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

Note— The characteristics of an acceptable flame can be found in ISO 2685.

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.

Fit for duty

Physiologically and mentally prepared and capable of performing assigned duties at the highest degree of safety.

Fixed light

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

Flame ionization detector

A hydrogen-air diffusion flame detector that produces a signal nominally proportional to the mass-flow rate of hydrocarbons entering the flame per unit of time — generally assumed responsive to the number of carbo atoms entering the flame.

Flame resistant

Not susceptible to combustion to the point of propagating a flame beyond safe limits after the ignition source is removed.

Flammable

With respect to liquid or gas, susceptible to igniting readily or to exploding.

Flap extended speed (V_{FE})

The highest speed permissible with wing flaps in a prescribed, extended position.

Flight crew member

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

Flight cycle

A complete flight segment consisting of a takeoff, climb, en-route portion, descent, and a landing.

Note— also referred to as Operating cycle or Time in service.

Flight data analysis

A process of analyzing recorded flight data in order to improve the safety of flight operations.

Flight documentation (meteorological)

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

Flight duty period (FDP)

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

Flight information center (FIC)

A unit established to provide flight information service and alerting service.

Flight information region (FIR)

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

Flight information service

A service provided for the purpose of giving advice and information useful for the safe and efficient conduct of flights.

Flight level

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

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

a) when set to a QNH altimeter setting, will indicatealtitude;

b) when set to a QFE altimeter setting, will indicate height above the QFE reference datum;

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

Flight manual

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

Flight operations officer/flight dispatcher

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

Flight plan

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

Note— Specifications for flight plans are contained in the ICAO Annex 2. When the expression "fligh plan form" is used it denotes the model flight plan form at Appendix 2 to the PANS-ATM (ICAO Doc 4444).

Flight procedures trainer

See Flight simulation training device.

Flight recorder

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

Flight safety documents system

A set of interrelated 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 simulation training device (FSTD)

Any one of the following three types of apparatus in which flight conditions are simulated on the ground:

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

A flight procedures trainer, which provides a realistic flight deck environment, and which simulates

instrument responses, simple control functions of mechanical, electrical, electronic, etc. aircraft systems, and the performance and flight characteristics of aircraft of a particular class;

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

Flight simulator

See Flight simulation training device.

Flight Time - Airplane

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

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

Flight time — helicopters

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

Flight time — remotely piloted aircraft systems

The total time from the moment a command and control (C2) link is established between the remote pilot station (RPS) and the remotely piloted aircraft (RPA) for the purpose of taking off or from the moment the remote pilot receives control following a handover until the moment the remote pilot completes a handover or the C2 link between the RPS and the RPA is terminated at the end of the flight.

Applicable until 25 November 2026.

Flight time — remotely piloted aircraft systems

The total time from the moment a C2 Link is established between the remote pilot station (RPS) and the remotely piloted aircraft (RPA) for the purpose of taking off or from the moment the remote pilot receives control following a handover until the moment the remote pilot completes a handover or the C2 Link between the RPS and the RPA is terminated at the end of the flight.

Applicable as of 26 November 2026.

Flight training

Flight crew member training received from an authorized instructor in an aircraft in flight or using a flight simulation training device (FSTD) or aviation training device (ATD).

Flight training device (FTD)

A replica of aircraft instruments, equipment, panels, and controls in an open or enclosed flight deck area. It includes the equipment and computer programs necessary to represent aircraft operations (or a set of aircraft operations) in ground and flight conditions. It has the full range of capabilities of the systems installed in the device as described in GACAR Part 60 and the qualification performance standards (QPS) for a specific FTD qualification level.

Flight training equipment

Full flight simulators (FFS), flight training devices (FTD), and aircraft.

Flight visibility

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

Flight deck duty

Duties of a flight crew member that are required for the operation of an aircraft.

Flight-Scheduled

In the context of flight operations, a passenger-carrying operation for compensation or hire, conducted by the holder of an air operator certificate, for which the certificate holder offers, in advance, the departure location and departure time, and an arrival location different than the departure location.

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.

Foot (ft)

The length equal to 0.304 8 metre exactly.

Forecast

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

Foreign aircarrier

Any person other than a citizen of the Kingdom of Saudi Arabia holding an air operator certificate issued by a foreign state, who undertakes directly, by lease or other arrangement, to engage in commercial air transport operations to, from, or within the Kingdom of Saudi Arabia.

Foreign object debris (FOD)

An inanimate object within the movement area which has no operational or aeronautical function and which has the potential to be a hazard to aircraft operations.

Foreign qualifying authority (FQA)

For flight simulation training devices (FSTD) qualified in accordance with GACAR § 60.55, the FAA or the contracting state to the Convention on International Civil Aviation which has issued the qualification upon the basis of which a Statement of Qualification (SOQ) is issued by the President.

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.

Frame

The basic unit of transfer at the link level. In the context of Mode S subnetwork, a frame can include from one to four Comm-A or Comm-B segments, from two to sixteen Comm-C segments, or from one to sixteen Comm-D segments.

Frangible object

An object of low mass designed to break, distort or yield on impact so as to present the minimum hazard to aircraft. *Note— Guidance on design for frangibility is contained in the Aerodrome Design Manual (Do 9157), Part 6.*

Free text message element

Part of a message that does not conform to any standard message element in the PANS-ATM (Doc 4444).

Free zone

A part of the territory of a Contracting State where any goods introduced are generally regarded, insofar as import duties and taxes are concerned, as being outside the customs territory.

Free-field sensitivity level of a microphone system

In decibels, twenty times the logarithm to the base ten of the ratio of the free-field sensitivity of a microphone system and the reference sensitivity of one volt per pascal.

Note— The free-field sensitivity level of a microphone system may be determined by subtracting the sound pressure level (in decibels re 20 µPa) of the sound incident on the microphone from the voltage level (in decibels re 1 V) at the output of the microphone system, and adding 93.98 dB to the result.

Free-field sensitivity of a microphone system

In volts per pascal, for a sinusoidal plane progressive sound wave of specified frequency, at a specified sound-incidence angle, the quotient of the root-mean-square voltage at the output of a microphone system and the root-mean-square sound pressure that would exist at the position of the microphone in its absence.

Freight container

An article of transport equipment designed to facilitate the transport of goods by one or more modes of transport.

Freight forwarder

A Dangerous Goods Preparer Certificate DGPC holder who offers the service of arranging the transport of cargo by air on behalf of a shipper.

Frequency assignment

A logical assignment of center frequency and channel bandwidth programmed to the base station (BS).

Frequency channel

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

Note— The classification of emissions and information relevant to the portion of the frequency spectrum appropriate for a given type of transmission (bandwidths) are specified in the Radio Regulations, Article 2 and Appendix 1.

FSTD approval

The extent to which a flight simulation training device (FSTD) may be used by a certificate holder as authorized by the GACA.

Full flight simulator (FFS)

A replica of a specific type; or make, model, and series aircraft flight deck. It includes the assemblage of equipment and computer programs necessary to represent aircraft operations in ground and flight conditions, a visual system providing an out-of-the-flight deck view, a system that provides cues at least equivalent to

those of a three- degree- of-freedom motion system, and has the full range of capabilities of the systems installed in the device as described in GACAR Part 60 and the qualification performance standards (QPS) for a specific FFS qualification level.

Full-time staff

Members of staff who are employed for not less than 35 hours per week excluding vacation and holiday periods.

Fully automatic relay installation

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

Gain-to-noise temperature ratio

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

GAMET area forecast

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

Gas concentration

The volume fraction of the component of interest in the gas mixture — expressed as volume percentage or a parts per million.

Gaussian filtered frequency shift keying (GFSK)

A continuous-phase, frequency shift keying technique using two tones and a Gaussian pulse shape filter.

GBAS/E - GNSS

A ground-based augmentation system transmitting an elliptically-polarized VHF data broadcast.

GBAS/H - GNSS

A ground-based augmentation system transmitting a horizontally-polarized VHF data broadcast.

General aviation operation

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

Note— Also referred to as "Non-commercial operation".

General formatter/manager (GFM)

The aircraft function responsible for formatting messages to be inserted in the transponder registers. It is also responsible for detecting and handling error conditions such as the loss of input data.

Generic aerodrome model

A Class III visual model that combines correct navigation aids for a real world aerodrome with a visual model that does not depict that same aerodrome.

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.

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

Geoid undulation

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

Note— In respect to the World Geodetic System — 1984 (WGS-84) defined ellipsoid, the differen between the WGS-84 ellipsoidal height and orthometric height represents WGS-84 geoid undulation.

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.

Global navigation satellite system (GLONASS)

The satellite navigation system operated by the Russian Federation.

Global navigation satellite system (GNSS)

A worldwide position and time determination system that includes one or more satellite constellations, aircraft receivers and system integrity monitoring, augmented as necessary to support the required navigation performance for the intended operation.

Global positioning system (GPS)

The satellite navigation system operated by the United States.

Global signaling channel (GSC)

A channel available on a worldwide basis which provides for communication control.

GNSS position error

The difference between the true position and the position determined by the GNSS receiver.

GNSS-Integrity

A measure of the trust that can be placed in the correctness of the information supplied by the total system. Integrity includes the ability of a system to provide timely and valid warnings to the user (alerts).

GNSS-Receiver

A subsystem that receives GNSS signals and includes one or more sensors.

GNSS-Reserved (bits/words/fields)

Bits/words/fields that are not allocated, but which are reserved for a particular GNSS application. Bits/words/fields that are not allocated, but which are reserved for a particular GNSS application.

GNSS-Spare (bits/words/fields)

Bits/words/fields that are not allocated or reserved, and which are available for future allocation.

Note— All spare bits are set to zero.

Go-around power or thrust setting

The maximum allowable in-flight power or thrust setting identified in the performance data.

Gold code - GNSS

A class of unique codes used by GPS, which exhibit bounded cross-correlation and off-peak auto-correlation values.

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 (ISO 19108, Geographic information on Temporal schema).

Note— In the Gregorian calendar, common years have 365 days and leap years 366 days divided into twelve sequential months.

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.

Note— In most cases, such data are transmitted on medium- or high-speed telecommunications channels.

Grooved or porous friction course runway

A paved runway that has been prepared with lateral grooving or a porous friction course (PFC) surface to improve braking characteristics when wet.

Ground data circuit-terminating equipment (GDCE)

A ground specific data circuit-terminating equipment associated with a ground data link processor (GDLP). It operates a protocol unique to Mode S data link for data transfer between air and ground.

Ground data link processor (GDLP)

A ground-resident processor that is specific to a particular air-ground data link (e.g. Mode S), and which

provides channel management, and segments and/or reassembles messages for transfer. It is connected on one side (by means of its DCE) to ground elements common to all data link systems, and on the other side to the air-ground link itself.

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.

Note— This definition is used in the ITU's Radio Regulations under the term "aeronautical earth station". The definition herein as "GES" for use in the SARPs is to clearly distinguish it from an aircraft earth station (AES), which is a mobile station on an aircraft.

Ground equipment

Articles of a specialized nature for use in the maintenance, repair and servicing of an aircraft on the ground, including testing equipment and cargo- and passenger-handling equipment.

Ground handling

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

Ground handling agent

A person that performs a function or functions on behalf of an operator. Functions performed by a ground handling agent may include, without limitation, receiving, loading, unloading, transferring, or other processing of passengers or cargo.

Ground icing conditions

a)Conditions defined as ground icing conditions in the applicable AFM;or

b)If the aircraft manufacturer has not defined ground icing conditions, conditions such that frost, ice, or snow is adhering or may reasonably be expected to adhere to the surface of an aircraft, taking into account aircraft skin temperature and weather conditions.

Ground training

Crew member training, other than flight training, received from an authorized instructor.

Ground visibility

The visibility at an aerodrome as reported by an accredited observer or by automatic systems.

Ground-based augmentation system (GBAS)

An augmentation system in which the user receives augmentation information directly from a ground-based transmitter.

Ground-based regional augmentation system (GRAS)

An augmentation system in which the user receives augmentation

information directly from one of a group of ground-based transmitters covering a region.

Ground-initiated Comm-B (GICB)

The ground-initiated Comm-B protocol allows the interrogator to extract Comm-B replies containing data from a defined source in the MB field.

Ground-initiated protocol

A procedure initiated by a Mode S interrogator for delivering standard length or extended length messages to a Mode S aircraft installation.

Ground-to-air communication

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

Gyroglider

A manned, nonpowered heavier-than-air vehicle supported in flight by the reaction of the air on one or more rotors which rotate freely on substantially vertical axes.

Gyroplane

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

Half course sector

The sector, in a horizontal plane containing the course line and limited by the loci of points nearest to the course line at which the DDM is 0.0775.

Half ILS glide path sector

The sector in the vertical plane containing the ILS glide path and limited by the loci of points nearest to the glide path at which the DDM is 0.0875.

Handover

The act of passing piloting control from one remote pilot station to another.

Hazard

A condition or an object with the potential to cause or contribute to an aircraft incident or accident.

Hazard beacon

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

Heading

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

Head-up display (HUD)

A display system that presents flight information into the pilot's forward external field of view.

Health-related documentation

Documentary evidence required by Contracting States, including those standardized by the World Health Organization (WHO) International Health Regulations (IHR) (2005), to indicate that passengers and crew members have fulfilled the requirements for preventing and mitigating the spread of communicable diseases for the purposes of transiting or entering a Contracting State.

Heavier-than-air aircraft

Any aircraft deriving its lift in flight chiefly from aerodynamic forces.

Height

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

Note— The point referred to above is the lowest part of the airplane and the specified datum is the take-of or landing surface, whichever is applicable.

Helicopter

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

Note— Some States use the term "rotorcraft" as an alternative to "helicopter".

Helicopter clearway

A defined area on the ground or water, selected and/or prepared as a suitable area over which a helicopter operated in performance class 1 may accelerate and achieve a specific height.

Helicopter ground taxiway

A ground taxiway intended for the ground movement of wheeled undercarriage helicopters.

Helicopter stand

A defined area intended to accommodate a helicopter for purposes of: loading or unloading passengers, mail or cargo; fueling, parking or maintenance; and, where air taxiing operations are contemplated, the TLOF.

Helicopter taxi-route

A defined path established for the movement of helicopters from one part of a heliport to another.

a) An air taxi-route. A marked taxi-route intended for air taxiing.

b) A ground taxi-route. A taxi-route centered on a taxiway.

Helicopter taxiway

A defined path on a heliport intended for the ground movement of wheeled undercarriage helicopters and that may be combined with an air taxi-route to permit both ground and air taxiing.

Helideck

A heliport located on a fixed or floating offshore facility such as an exploration and/or production unit used for the exploitation of oil or gas.

Heliport

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

Note 1— Throughout this Part, when the term "heliport" is used, it is intended that the term also applie to aerodromes primarily meant for the use of airplanes.

Note 2— Helicopters may be operated to and from areas other than heliports.

Heliport elevation

The elevation of the highest point of the FATO.

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, cloudconditions;

b) landing in 2D instrument approach operations, expressed in terms of visibility and/or runway visual range, minimum descent altitude/height (MDA/H) and, if necessary, cloud conditions; and

c) landing in 3D instrument approach operations, expressed in terms of visibility and/or runway visual range and decision altitude/height (DA/H) as appropriate to the type and/or category of the operation.

Heliport reference point (HRP)

The designated location of a heliport.

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.

High frequency network protocol data unit (HFNPDU)

User data packet.

High performance receiver

A UAT receiver with enhanced selectivity to further improve the rejection of adjacent frequency DME interference (see ICAO Annex 10 Vol III, 12.3.2.2 for further details).

High-performance airplane

An airplane with an engine capable of producing more than 150 kW.

High-risk cargo or mail

Cargo or mail presented by an unknown entity or showing signs of tampering shall be considered high risk if, in addition, it meets one of the following criteria:

a) specific intelligence indicates that the cargo or mail poses a threat to civil aviation;or

b) the cargo or mail shows anomalies that give rise to suspicion; or

c) the nature of the cargo or mail is such that baseline security measures alone are unlikely to detect prohibited items that could endanger the aircraft.

Regardless of whether the cargo or mail comes from a known or unknown entity, a State’s specific

intelligence about a consignment may render it as high risk.

Holding bay

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

Holding procedure

A predetermined maneuver 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 airplane.

Home base

The location designated by a certificate holder where a flight crew member normally begins and ends his duty periods.

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.

Horizontal miss distance (hmd)

The minimum horizontal separation observed in an encounter.

Hostile environment

An environment in which:

a) a safe forced landing cannot be accomplished because the surface and surrounding environment are inadequate; or

b) the helicopter occupants cannot be adequately protected from the elements; or

c) search and rescue response/capability is not provided consistent with anticipated exposure; or

d) there is an unacceptable risk of endangering persons or property on the ground.

Hot spot

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

Human Factors principles

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

Human performance

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

Hypsometric tints

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

ICAO competency framework

A competency framework, developed by ICAO, is a selected group of competencies for a given aviation discipline.

Each competency has an associated description and observable behaviours.

ICAO meteorological information exchange model (IWXXM)

A data model for representing aeronautical meteorological information.

ICAO Public Key Directory (ICAO PKD)

The central database serving as the repository of Document Signer Certificates (CDS) (containing Document Signer Public Keys), CSCA Master List (MLCSCA), Country Signing CA Link Certificates (lCCSCA) and Certificate Revocation Lists issued by Participants, together with a system for their distribution worldwide, maintained by ICAO on behalf of Participants in order to facilitate the validation of data in eMRTDs.

Identification beacon

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

Idle thrust

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.

IFR

The symbol used to designate the instrument flight rules.

IFR flight

A flight conducted in accordance with the instrument flight rules.

ILS continuity of service

That quality which relates to the rarity of radiated signal interruptions. The level of continuity of service of the localizer or the glide path is expressed in terms of the probability of not losing the radiated guidance signals.

ILS glide path angle

The angle between a straight line which represents the mean of the ILS glide path and the horizontal.

ILS glide path sector

The sector in the vertical plane containing the ILS glide path and limited by the loci of points nearest to the glide path at which the DDM is 0.175.

Note— The ILS glide path sector is located in the vertical plane containing the runway center line, and i divided by the radiated glide path in two parts called upper sector and lower sector, referring respectively to the sectors above and below the glide path.

ILS integrity

That quality which relates to the trust which can be placed in the correctness of the information supplied by the facility. The level of integrity of the localizer or the glide path is expressed in terms of the probability of not radiating false guidance signals.

ILS Point “A”

A point on the ILS glide path measured along the extended runway center line in the approach direction a distance of 7.5 km (4 NM) from the threshold.

ILS Point “B”

A point on the ILS glide path measured along the extended runway center line in the approach direction a distance of 1 050 m (3 500 ft) from the threshold.

ILS Point "C"

A point through which the downward extended straight portion of the nominal ILS glide path passes at a height of 30 m (100 ft) above the horizontal plane containing the threshold.

ILS Point "D"

A point 4 m (12 ft) above the runway center line and 900 m (3 000 ft) from the threshold in the direction of the localizer.

ILS Point "E"

A point 4 m (12 ft) above the runway center line and 600 m (2 000 ft) from the stop end of the runway in the direction of the threshold.

ILS reference datum (Point "T")

A point at a specified height located above the intersection of the runway center line and the threshold and through which the downward extended straight portion of the ILS glide path passes.

IMC

The symbol used to designate instrument meteorological conditions.

Immigration control

Measures adopted by States to control the entry into, transit through and departure from their territories of persons travelling by air.

Implementation schedule

Documentation that establishes the timing for accomplishing the necessary actions for developing damage tolerance (DT) data for repairs and alterations, and for incorporating those data into an operator's Continuous Airworthiness Maintenance Program (CAMP). The documentation must identify times when actions must be taken as specific numbers of airplane flight hours, flight cycles, or both.

Import duties and taxes

Customs duties and all other duties, taxes or charges, which are collected on or in connection with the importation of goods. Not included are any charges which are limited in amount to the approximate cost of services rendered or collected by the customs on behalf of another national authority.

Imposter

A person who impersonates the rightful holder of a genuine travel document.

Improperly documented person

A person who travels, or attempts to travel:

(a) with an expired travel document or an invalid visa;

(b) with a counterfeit, forged or altered travel document or visa;

(c) with someone else's travel document or visa;

(d) without a travel document; or € without a visa, if required.

Inadmissible person

A person who is or will be refused admission to a State by its authorities.

INCERFA

The code word used to designate an uncertainty phase.

Incident

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

Note 1— The types of incidents which are of interest for safety-related studies include the incidents listed in the ICAO Annex 13, Attachment C.

Note 2— Also referred to as "aircraft incident".

Incoming circuit responsibility list

A list, for each incoming circuit of a communication center, of the location indicators for which relay responsibilities are to be accepted in respect of messages arriving on that circuit.

Increased rate RA

A resolution advisory with a strength that recommends increasing the altitude rate to a value exceeding that recommended by a previous climb or descend RA.

Independent parallel approaches

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

Independent parallel departures

Simultaneous departures from parallel or near-parallel instrument runways.

Individual flotation device

An article, intended to aid in buoyancy of a person in water, the design and manufacture of which meet the requirements of the most recent version of FAA TSO–C72, or another standard acceptable to the President.

Industry codes of practice

Guidance material developed by an industry body, for a particular sector of the aviation industry to comply with the requirements of the International Civil Aviation Organization's Standards and Recommended Practices, other aviation safety requirements and the best practices deemed appropriate.

Note— Some States accept and reference industry codes of practice in the development of regulations t meet the requirements of the ICAO Annex 6, Part II, and make available, for the industry codes of practice, their sources and how they may be obtained.

In-flight security officer

A person who is authorized by the government of the State of the Operator and the government of the State of Registration to be deployed on an aircraft with the purpose of protecting that aircraft and its occupants against acts of unlawful interference. This excludes persons employed to provide exclusive personal protection for one or more specific people travelling on the aircraft, such as personal bodyguards.

In-flight shutdown (IFSD)

For purposes of ETOPS, an airborne occurrence in which an engine ceases to function and is shut down, whether self-induced, flight crew initiated, or caused by an external influence. This includes, but is not limited to: flameout, internal failure, flight crew initiated shutdown, foreign object ingestion, icing, inability to obtain or control desired thrust or power, and cycling of the start control, however briefly, even if the engine operates normally for the remainder of the flight. This definition does not include the airborne cessation of the functioning of an engine when immediately followed by an automatic engine relight and when an engine does not achieve desired thrust or power but is not shut down.

Initial approach (IA) mode

The condition of DME/P operation which supports those flight operations outside the final approach region and which is interoperable with DME/N.

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.

Initial training

a) As used in GACAR Part 121, the training required for crew members and dispatchers who have not qualified and served in the same capacity on or with respect to another aircraft of the same group, as specified in GACAR § 121.5(a), for the same certificate holder ;and

b) As used in GACAR Part 135,thetrainingrequired for crew members who have not qualified and served in the same capacity on another aircraft for the same certificate holder.

Instructor

For purposes of GACAR Part 142, a person employed by a training center and designated to provide instruction in accordance with Subpart C of that part.

Instrument

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

Instrument approach operations

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

a) a two-dimensional (2D) instrument approach operation, using lateral navigation guidance only;and

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

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

a) a ground-based radio navigation aid; or

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

Instrument approach procedure (IAP)

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

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

Note— Non-precision approach procedures may be flown using a continuous descent final approach (CDFA) technique. CDFAs with advisory VNAV guidance calculated by on-board equipment are

considered 3D instrument approach operations. CDFAs with manual calculation of the required rate of descent are considered 2D instrument approach operations. For more information on CDFAs, refer to PANS-OPS (Doc 8168), Volume I, Part II, Section 5.

Approach procedure with vertical guidance (APV). A performance-based navigation (PBN) instrument approach procedure designed for 3D instrument approach operations Type A.

Precision approach (PA) procedure. An instrument approach procedure based on navigation systems (ILS, MLS, GLS and SBAS CAT I) designed for 3D instrument approach operations Type A or B.

Note— Refer to the ICAO Annex 6 Part I 4.2.8.3 for instrument approach operation types.

Instrument flight conditions

Meteorological conditions experienced in flight such that flight by outside visual references is not possible.

Instrument flight procedure (IFP)

A description of a series of predetermined flight maneuvers by reference to flight instruments, published by electronic and/or printed means.

Instrument flight procedure design service

A service established for the design, documentation, validation, maintenance and periodic review of instrument flight procedures necessary for the safety, regularity and efficiency of air navigation.

Instrument flight time

Time during which a pilot is piloting an aircraft, or a remote pilot is piloting a remotely piloted aircraft, solely by reference to instruments and without external reference points.

Note— 3rd Nov 2022 onwards.

Instrument ground time

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

Instrument meteorological conditions (IMC)

Meteorological conditions expressed in terms of visibility, distance from cloud, and ceiling, less than the minima specified for visual meteorological conditions.

Note— The specified minima for visual meteorological conditions are contained in Chapter 4 of the ICAO Annex 2.

Instrument runway

It is also known as Precision approach runway.

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

a) Non-precision approach runway. A runway served by visual aids and non-visual aid(s) intended for landing operations following an instrument approach operation type A and a visibility not less than 1 000 m.

b) Precision approach runway, category I. A runway served by visual aids and non-visual aid(s) intended for landing operations following an instrument approach operation type B with a decision height (DH) 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. A runway served by visual aids and non-visual aid(s) intended for landing operations following an instrument approach operation type B with a decision height (DH) lower than 60 m (200 ft but not lower than 30 m (100 ft) and a runway visual range not less than 300 m.

d) Precision approach runway, category III. A runway served by visual aids and non-visual aid(s) intended for landing operations following an instrument approach operation type B with a decision height (DH) lower than 30 m (100 ft), or no decision height and a runway visual range less than 300 m or no runway visual range limitations.

Note 1— Visual aids need not necessarily be matched to the scale of non-visual aids provided. Th criterion for the selection of visual aids is the conditions in which operations are intended to be conducted.

Note 2— Refer to ICAO Annex 6 - Operation of Aircraft for instrument approach operation types.

Instrument time

Instrument flight time or instrument ground time.

Instrument training

The time in which training is received from an authorized instructor under actual or simulated instrument meteorological conditions (IMC).

Integrated Aeronautical Information Package

Aeronautical Information Package consisting of the following elements:

—Aeronautical Information Publication (AIP);

—Amendment service to the AIP (AIP AMDT);

—Supplement to the AIP (AIP SUP);

—NOTAM and Pre-flight Information Bulletins (PIB);

—Aeronautical Information Circulars (AIC); and

—Checklists and lists of valid NOTAM.

Integrated survival suit

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

Integrity

With respect to aeronautical data, a degree of assurance that aeronautical data and their values have not been lost or altered since the data origination or authorized amendment.

Integrity classification (aeronautical data)

Classification based upon the potential risk resulting from the use of corrupted data. Aeronautical data is classified as:

a) routine data: there is a very low probability when using corrupted routine data that the continued safe flight and landing of an aircraft would be severely at risk with the potential forcatastrophe;

b) essential data: there is a low probability when using corrupted essential data that the continued safe flight and landing of an aircraft would be severely at risk with the potential for catastrophe; and

c) critical data: there is a high probability when using corrupted critical data that the continued safe flight and landing of an aircraft would be severely at risk with the potential for catastrophe.

Interactive API (iAPI) system

An electronic system that transmits, during check-in, API data elements collected by the aircraft operator to public authorities who, within existing business processing times for passenger check-in, return to the operator a response message for each passenger and/or crew member.

Interference

Instrument response due to presence of components other than the gas (or vapour) that is to be measured.

Intermediate approach segment

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

Intermediate holding position

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

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 airways volcano watch (IAVW)

International arrangements for monitoring and providing warnings to aircraft of volcanic ash in the atmosphere.

Note— The IAVW is based on the cooperation of aviation and non-aviation operational units using information derived from observing sources and networks that are provided by States. The watch is coordinated by ICAO with the cooperation of other concerned international organizations.

International NOTAM office (NOF)

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

International operating agency

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

International telecommunication service

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

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.

Intruder

An aircraft for which ACAS has an established track.

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/or contributing factors 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.

Note— Nothing in the above definition is intended to preclude the functions of an investigator-in-charg being assigned to a commission or other body.

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.

Isolatedaerodrome

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

Joint rescue coordination center (JRCC)

A rescue coordination center responsible for both aeronautical and maritime search and rescue operations.

Joule (J)

The work done when the point of application of a force of 1 newton is displaced a distance of 1 meter 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.

Key down time

The time during which a dot or dash of a Morse character is being transmitted.

Kilogram (kg)

The unit of mass equal to the mass of the international prototype of the kilogram.

Kite

A framework covered with paper, cloth, metal, or other material, intended to be flown at the end of a rope or

cable, and whose only support is the force of the wind moving past its surfaces.

Knot (kt)

The speed equal to 1 nautical mile per hour.

Knowledge test

A test on the knowledge areas required for an airman certificate or rating.

Known consignor

A consignor who originates cargo or mail for its own account and whose procedures meet common security rules and standards sufficient to allow the carriage of cargo or mail on any aircraft.

Lading

The placing of cargo, mail, baggage or stores on board an aircraft to be carried on a flight.

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, an engine failure occurring at this point, the landing may be safely continued or a balked landing initiated.

Note— LDP applies only to helicopters operating in performance Class 1.

Landing direction indicator

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

Landing distance available (LDA)-aircraft

The length of runway which is declared available and suitable for the ground run of an airplane landing.

Landing distance available (LDA)-rotorcraft

With respect to rotorcraft operations, the length of the final approach and takeoff area (FATO) plus any additional area declared available and suitable for rotorcraft to complete the landing maneuver from a defined height.

Landing distance required (LDRH)

The horizontal distance required for a rotorcraft to land and come to a full stop from a point 50 ft (15 m) above the landing surface.

Landing gear extended speed (VLE)

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

Landing gear operating speed (VLO)

The maximum speed at which the landing gear can be safely extended or retracted.

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.

Large airplane

An airplane of a maximum certificated take-off mass of over 5 700 kg.

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 of 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.

Layout of passenger accommodations (LOPA)

An engineering diagram of an aircraft's interior that includes, but is not limited to, the locations of passenger and cabin crew member seats, emergency equipment, exits, lavatories, and galleys.

Lease

A contractual arrangement under which a certificated air operator grants or obtains use of an aircraft for a period of time without transfer of ownership.

Lessee

The party to which an aircraft or other property is leased.

Lessor

The party from which an aircraft or other property is leased.

Level

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

Level aircraft

An aircraft that is not transitioning.

Level difference

In decibels, for any nominal one-third octave midband frequency, the output signal level measured on any level range minus the level of the corresponding electrical input signal.

Level non-linearity

In decibels, the level difference measured on any level range, at a stated one-third octave nominal midband frequency, minus the corresponding reference level difference, all input and output signals being relative to the same reference quantity.

Level range

In decibels, an operating range determined by the setting of the controls that are provided in a measurement system for the recording and one-third octave band analysis of a sound pressure signal. The upper boundary associated with any particular level range shall be rounded to the nearest decibel.

Licensing Authority

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

Note— As the provisions of the ICAO Annex 1, the Licensing Authority is deemed to have been given th following responsibilities by the President:

a) assessment of an applicant's qualifications to hold a license or rating;

b) issue and endorsement of licenses and ratings;

c) designation and authorization of approved persons;

d) approval of training courses;

e) approval of the use of flight simulation training devices and authorization for their use in gaining the experience or in demonstrating the skill required for the issue of a license or rating; and

f)validation of licenses issued by other Countries.

Lighter-than-air aircraft

Any aircraft supported chiefly by its buoyancy in the air.

Lighting system reliability

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

Light-sport aircraft (LSA)

An aircraft, other than a helicopter or powered lift that, since its original certification, has continued to meet the following:

a) A maximum takeoff mass of not more than—

(1) 600 kg for aircraft not intended for operation on water;or

(2) 650 kg for an aircraft intended for operation on water

b) A maximum never exceed speed (VNE) of not more than 120 kt (222 km/h) CAS for a glider.

c) A maximum stall speed or minimum steady flight speed without the use of lift enhancing devices (VS1) of not more than 45 kt (83 km/h) CAS at the aircraft's maximum certificated takeoff mass and most critical center of gravity.

d) A maximum seating capacity of no more than two persons, including the pilot.

e) A single, reciprocating engine, if powered..

f) A fixed or auto feathering propeller system if a powered glider.

g) A fixed pitch, semi rigid, teetering, two blade rotor system, if a gyroplane.

h) A non-pressurized cabin, if equipped with a cabin.

i) Fixed or retractable landing gear, or a hull, for an aircraft intended for operation on water.

Likely

In the context of the medical provisions in Chapter 6 of the ICAO Annex 1, likely means with a probability of occurring that is unacceptable to the medical assessor.

Limit loads

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

Line maintenance

Maintenance performed for an air operator certificated under GACAR Part 121 or 135, or for a foreign air carrier operating under GACAR Part 129, which is generally performed at the ramp, parking area, or gate, and typically will not exceed 24 continuous hours per aircraft.

Line operating flight time

The flight time performed in operations under GACAR Part 121.

Line operational simulation (LOS)

A simulation conducted using operational oriented flight scenarios that accurately replicate interaction among flight crew members and between flight crew members and dispatch facilities, other crew members, ATC, and ground operations. LOS are conducted for training and evaluation purposes and include random, abnormal, and emergency occurrences. LOS specifically includes line oriented flight training, special purpose operational training, and line operational evaluation.

Linear operating range

In decibels, for a stated level range and frequency, the range of levels of steady sinusoidal electrical signals applied to the input of the entire measurement system, exclusive of the microphone but including the microphone preamplifier and any other signal-conditioning elements that are considered to be part of the microphone system, extending from a lower to an upper boundary, over which the level non-linearity is within specified tolerance limits.

Note— It is not necessary to include microphone extension cables as configured in the field.

Lineholder

A flight crew member who has an assigned flight duty period and is not acting as a reserve flight crew member.

Link

A link connects an aircraft DLE and a ground DLE and is uniquely specified by the combination of aircraft DLS address and the ground DLS address. A different subnetwork entity resides above every link endpoint.

Link layer

The layer that lies immediately above the physical layer in the Open Systems Interconnection protocol model. The link layer provides for the reliable transfer of information across the physical media. It is subdivided into the data link sublayer and the media access control sublayer.

Link management entity (LME)

A protocol state machine capable of acquiring, establishing and maintaining a connection to a single peer system. An LME establishes data link and subnetwork connections, “hands-off” those connections, and manages the media access control sublayer and physical layer. An aircraft LME tracks how well it can communicate with the ground stations of a single ground system. An aircraft VME instantiates an LME for each ground station that it monitors. Similarly, the ground VME instantiates an LME for each aircraft that it monitors. An LME is deleted when communication with the peer system is no longer viable.

Link protocol data unit (LPDU)

Data unit which encapsulates a segment of an HFNPDU.

Liter (L)

A unit of volume restricted to the measurement of liquids and gases which is equal to 1 cubic decimeter.

Load factor

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

Location indicator

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

Locator

An LF/MF NDB used as an aid to final approach.

Note— A locator usually has an average radius of rated coverage of between 18.5 and 46.3 km (10 and 25 NM).

Logon address

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

Long-call reserve

That, prior to beginning the rest period required by GACAR § 117.25, the flight crew member is notified by the certificate holder to report for a flight duty period following the completion of the rest period.

Long-range communication system (LRCS)

A system that uses satellite relay, data link, high frequency, or another approved communication system that 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 an inertial navigation system, global positioning system, or a Long Range Navigation (LORAN)−C system.

Low modulation rates

Modulation rates up to and including 300 bauds.

Low-visibility operations (LVO)

Approach operations in RVRs less than 550 m and/or with a DH less than 60 m (200 ft) or take-off operations in RVRs less than 400 m.

Low visibility procedures (LVP)

Procedures applied at an aerodrome for the purpose of ensuring safe operations during LTS Category I, OTS Category II, Category II and III approaches and low visibility takeoffs.

Low visibility takeoff (LVTO)

A takeoff where the visibility is below the standard takeoff minimums as prescribed in GACAR § 91.191(k).

Lower than standard (LTS) CAT I

A Category I precision approach procedure conducted when reported visibility is below the standard minimums required for such procedures. Only operators specifically authorized by the President under GACAR Part 91 may conduct LTS CAT I operations.

LS glide path

That locus of points in the vertical plane containing the runway center line at which the DDM is zero, which, of all such loci, is the closest to the horizontal plane.

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 meter.

M burst

A management channel data block of bits used in VDL Mode 3. This burst contains signaling information needed for media access and link status monitoring.

Mach number

The ratio of true airspeed to the speed of sound.

Magnetic Bearing

The horizontal direction to or from any point, usually measured clockwise from true north, magnetic north, or some other reference point through 360 degrees.

Magnetic variation

The angular difference between True North and Magnetic North.

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

Mail

Dispatches of correspondence and other items tendered by and intended for delivery to postal services in accordance with the rules of the Universal Postal Union (UPU).

Main rotor

The rotor that supplies the principal lift to a rotorcraft.

Maintenance

The performance of tasks on an aircraft, engine, propeller or associated part required to ensure the continuing airworthiness of an aircraft, engine, propeller or associated part including any one or combination of overhaul, inspection, replacement, defect rectification, and the embodiment of a modification or repair, except transit/preflight inspection/preventive maintenance.

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 programme

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

Note— Also referred to "as aircraft inspection program".

Maintenance record

Records that set out the details of the maintenance carried out on an aircraft, engine, propeller or associated part.

Maintenance release

A document which contains a certification confirming that the maintenance work to which it relates has been completed in a satisfactory manner in accordance with appropriate airworthiness requirements.

Note— Also referred to as approval for Return to Service or Certificate Release to Service (CRS)

Major alteration

An alteration not listed in the aircraft, aircraft engine, or propeller specifications—

a)That might appreciably affect mass, balance, structural strength, performance, powerplant operation, flight characteristics, or other qualities affecting airworthiness;or

b)That is not done according to accepted practices or cannot be done by elementary operations.

Note— Further details on alterations that are major alterations is contained in Appendix A to GACAR Part 43.

Major repair

A repair

a) That,ifimproperlydone,mightappreciablyaffectmass,balance,structuralstrength,performance,powerplant operation, flight characteristics, or other qualities affecting airworthiness;or

b) That is not done according to accepted practices or cannot be done by elementary operations.

Note— Further details on repairs that are major repairs is contained in Appendix A to GACAR Part 43.

Manifold pressure

Absolute pressure as measured at the appropriate point in the induction system.

Maneuvering area

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

Margin

The maximum degree of distortion of the circuit at the end of which the apparatus is situated which is compatible with the correct translation of all the signals which it may possibly receive.

Marker

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

Marking

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

Marshaler

See Signalman.

M-ary phase shift keying (M-PSK) modulation

A digital phase modulation that causes the phase of the carrier waveform to take on one of a set of M values.

Master minimum equipment list (MMEL)

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

Master Qualification Test Guide (MQTG)

Electronic copy of the Master Qualification Test Guide (MQTG), as used in Subpart B of GACAR Part 60, means an electronic copy of the MQTG provided by an electronic scan presented in a format acceptable to the President.

Maximum carrying capacity

In relation to an aircraft, means the maximum passenger-seating capacity, or the maximum payload, permitted under the aircraft's certificate of type approval.

Maximum diversion time

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

Maximum engine overtorque

For all ratings except one engine inoperative (OEI) ratings of 2 minutes or less, the maximum torque of the free power turbine rotor assembly which will not require rejection of the engine from service, or any maintenance action other than to correct the cause, if that torque is inadvertently reached for up to 20 seconds.

Maximum mass

Maximum certificated take-off mass.

Maximum passenger seating capacity

The maximum certificated number of passengers for the aircraft type design.

Maximum payload capacity

For purposes of establishing regulatory applicability, the maximum payload capacity listed on an aircraft's type certificate, as amended by any applicable supplemental type certificate.

Maximum speed for stability characteristics

Maximum speed for stability characteristics (VFC/MFC) - A speed not less than midway between the maximum operating limit speed (VMO/MMO) and the demonstrated flight diving speed (VDF/MDF), except at altitudes where the mach number is the limiting factor, in which case MFC need not exceed the mach number at which effective speed warning occurs.

Maximum take-off mass

The highest of all take-off masses for the type design.

Mean course error

The mean value of the azimuth error along the runway extended center line.

Mean glide path error

The mean value of the elevation error along the glide path of an elevation function.

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.

Note— A time of 1/10 second during which the mean power is greatest will be selected normally.

Mean time between failures (MTBF)

The actual operating time of a facility divided by the total number of failures of the facility during that period of time.

Note— The operating time is in general chosen so as to include at least five, and preferably more, facilit failures in order to give a reasonable measure of confidence in the figure derived.

Measurement system

The combination of instruments used for the measurement of sound pressure levels, including a sound calibrator, windscreen, microphone system, signal recording and conditioning devices, and a one-third octave band analysis system.

Note— Practical installations may include a number of microphone systems, the outputs from which ar recorded simultaneously by a multi-channel recording/analysis device via signal conditioners as appropriate. For the purpose of this section, each complete measurement channel is considered to be a measurement system to which the requirements apply accordingly.

Media access control (MAC)

The sublayer that acquires the data path and controls the movement of bits over the data path.

Media access protocol data unit (MPDU)

Data unit which encapsulates one or more LPDUs.

Medical Assessment

The evidence issued by a Contracting State that the license holder meets specific requirements of medical fitness. *Note— Also referred to as Medical certificate.*

Medical assessor

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

Note 1 — Medical assessors evaluate medical reports submitted to the Licensing Authority by medica examiners.

Note 2— Medical assessors are expected to maintain the currency of their professional knowledge.

Medical examiner

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

Medical personnel

A person or persons with medical training, including but not limited to flight physicians, flight nurses, or flight paramedics, who are carried aboard an aircraft during air ambulance or rotorcraft emergency medical service operations in order to provide medical care.

Medium

As used in GACAR Part 60, means the normal operational mass for a given flight segment.

Medium modulation rates

Modulation rates above 300 and up to and including 3 000 bauds.

Message field

An assigned area of a message containing specified elements of data.

Metadata

Data about data (ISO 19115, Geographic information — Metadata).

Note— A structured description of the content, quality, condition or other characteristics of data.

Meteorological authority

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

Note—In KSA, National Meteorological Service provides the services.

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.

Note— "Integrated" is to be interpreted as a mode of operation necessary to ensure that the informatio can be transmitted and received by the stations within the network in accordance with pre-established schedules.

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.

Meteorological service

The provision of meteorological information/data necessary for the safety, regularity and efficiency of air navigation.

Meteorological watch office (MWO)

An office designated to provide information concerning the occurrence or expected occurrence of specified en- route weather and other phenomena in the atmosphere that may affect the safety of aircraft operations within its specified area of responsibility.

Meter (m)

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

Microphone system

The components of the measurement system which produce an electrical output signal in response to a sound

pressure input signal, and which generally include a microphone, a preamplifier, extension cables, and other devices as necessary.

Minimum descent altitude (MDA) or minimum descent height (MDH)

A specified altitude or height in a 2D instrument approach operation or circling approach operation below which descent must not be made without the required visual reference.

Note 1— Minimum descent altitude (MDA) is referenced to mean sea level and minimum descent heigh (MDH) is referenced to the aerodrome elevation or to the threshold elevation if that is more than 2 m (7 ft) below the aerodrome elevation. A minimum descent height for a circling approach is referenced to the aerodrome elevation.

Note 2— The required visual reference means that section of the visual aids or of the approach area whic should have been in view for sufficient time for the pilot to have made an assessment of the aircraft position and rate of change of position, in relation to the desired flight path. In the case of a circling approach the required visual reference is the runway environment.

Note 3— For convenience when both expressions are used they may be written in the form "minimur descent altitude/ height" and abbreviated "MDA/H".

Minimum en-route altitude (MEA)

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

Minimum equipment list (MEL)

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

Minimum glide path

The lowest angle of descent along the zero degree azimuth that is consistent with published approach procedures and obstacle clearance criteria.

Note— This is the lowest elevation angle which has been approved and promulgated for the instrumen runway.

Minimum obstacle clearance altitude (MOCA)

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

Minimum sector altitude (MSA)

The lowest altitude which may be used which will provide a minimum clearance of 300 m (1 000 ft) above all objects located in an area contained within a sector of a circle of 46 km (25 NM) radius centered on a

significant point, the aerodrome reference point (ARP) or the heliport reference point (HRP).

Minor

A person who has not attained the age of majority as determined under the law applicable to the person.

Minor alteration

An alteration other than a major alteration.

Minor repair

A repair other than a major repair.

Mishandled baggage

Baggage involuntarily, or inadvertently, separated from passengers or crew.

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.

MLS antenna boresight

The plane passing through the antenna phase center perpendicular to the horizontal axis contained in the plane of the antenna array.

Note— In the azimuth case, the boresight of the antenna and the zero degree azimuth are normally aligned. However, the preferred designation in a technical context is "boresight" whereas the preferred designation in an operational context is "zero degree azimuth".

MLS approach reference datum

A point on the minimum glide path at a specified height above the threshold.

MLS azimuth

The locus of points in any horizontal plane where the decoded guidance angle is constant.

MLS back azimuth reference datum

A point at a specified height above the runway center line at the runway midpoint.

MLS datum point

The point on the runway center line closest to the phase center of the approach elevation antenna.

MLS elevation

The locus of points in any vertical plane where the decoded guidance angle is constant.

MLS Out-of-coverage indication signal

A signal radiated into areas outside the intended coverage sector where required to specifically prevent invalid removal of an airborne warning indication in the presence of misleading guidance information.

MLS point D

A point 2.5 m (8 ft) above the runway center line and 900 m (3 000 ft) from the threshold in the direction of the azimuth antenna.

MLS point E

A point 2.5 m (8 ft) above the runway center line and 600 m (2 000 ft) from the stop end of the runway in the direction of the threshold.

MLS zero degree azimuth

The MLS azimuth where the decoded guidance angle is zero degrees.

MLS-Auxiliary data

Data, transmitted in addition to basic data, that provide ground equipment siting information for use in refining airborne position calculations and other supplementary information.

MLS-Basic data

Data transmitted by the ground equipment that are associated directly with the operation of the landing guidance system.

MLS-Beam center

The midpoint between the two minus 3-dB points on the leading and trailing edges of the scanning beam main lobe.

MLS-Beamwidth

The width of the scanning beam main lobe measured at the minus 3-dB points and defined in angular units on the boresight, in the horizontal plane for the azimuth function and in the vertical plane for the elevation function.

MLS-Clearance guidance sector

The volume of airspace, inside the coverage sector, within which the azimuth guidance information provided is not proportional to the angular displacement of the aircraft, but is a constant left or right indication of which side the aircraft is with respect to the proportional guidance sector.

MLS-Control motion noise (CMN)

That portion of the guidance signal error which causes control surface, wheel and column motion and could affect aircraft attitude angle during coupled flight, but does not cause aircraft displacement from the desired course and/or glide path.

MLS-Coordinate system — conical

A function is said to use conical coordinates when the decoded guidance angle varies as the minimum angle between the surface of a cone containing the receiver antenna, and a plane perpendicular to the axis of the cone and passing through its apex. The apex of the cone is at the antenna phase center. For approach azimuth or back azimuth functions, the plane is the vertical plane containing the runway center line. For elevation functions, the plane ishorizontal.

MLS-Coordinate system — planar

A function is said to use planar coordinates when the decoded guidance angle varies as the angle between the plane containing the receiver antenna and a reference plane. For azimuth functions, the reference plane is the vertical plane containing the runway center line and the plane containing the receiver antenna is a vertical plane passing through the antenna phase center.

MLS-Coverage sector

A volume of airspace within which service is provided by a particular function and in which the signal power density is equal to or greater than the specified minimum.

MLS-Function

A particular service provided by the MLS, e.g. approach azimuth guidance, back azimuth guidance or basic data, etc.

MLS-Standard receiver

The airborne receiver model assumed in partitioning the MLS error budgets. The salient characteristics are: (1) signal processing based on the measurement of beam centers; (2) negligible centering error; (3) control motion noise (CMN) less than or equal to the values contained in Chapter 3, 3.11.6.1.1.2 of the ICAO Annex 10, Volume I,; (4) a 26 kHz bandwidth 2-pole low pass beam envelope filter; and (5) angle data output filtering by a single pole, low pass filter with a corner frequency of 10 radians per second.

Mobile object

A movable device moving under the control of an operator, driver or pilot.

Mobile station (MS)

A station in the mobile service intended to be used while in motion or during halts at unspecified points. An MS is always a subscriber station (SS).

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 2

A data-only VDL mode that uses D8PSK modulation and a carrier sense multiple access (CSMA) control scheme.

Mode 3

A voice and data VDL mode that uses D8PSK modulation and a TDMA media access control scheme.

Mode 4

A data-only VDL mode using a GFSK modulation scheme and self-organizing time division multiple access (STDMA).

Mode S air-initiated Comm-B (AICB) protocol

A procedure initiated by a Mode S transponder for transmitting a single Comm-B segment from the aircraft installation.

Mode S broadcast protocols

Procedures allowing standard length uplink or downlink messages to be received by more than one

transponder or ground interrogator respectively.

Mode S ground-initiated Comm-B (GICB) protocol

A procedure initiated by a Mode S interrogator for eliciting a single Comm-B segment from a Mode S aircraft installation, incorporating the contents of one of 255 Comm-B registers within the Mode S transponder.

Mode S multisite-directed protocol

A procedure to ensure that extraction and close-out of a downlink standard length or extended length message is affected only by the particular Mode S interrogator selected by the aircraft.

Mode S packet

A packet conforming to the Mode S subnetwork standard, designed to minimize the bandwidth required from the air-ground link. ISO 8208 packets may be transformed into Mode S packets and vice-versa.

Mode S specific protocol (MSP)

A protocol that provides restricted datagram service within the Mode S subnetwork.

Mode S specific services

A set of communication services provided by the Mode S system which are not available from other air-ground subnetworks, and therefore not interoperable.

Mode S specific services entity (SSE)

An entity resident within an XDLP to provide access to the Mode S specific services.

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.

Mode W, X, Y, Z

A method of coding the DME transmissions by time spacing pulses of a pulse pair, so that each frequency can be used more than once.

Model aircraft

An unmanned heavier-than-air aircraft, other than an amateur rocket, that is —

a) Flown within visual line of sight of the person operating the aircraft;and

b) Flown for hobby or recreational purposes.

Modification

A change to the type design of an aircraft, engine or propeller.

Note— A modification may also include the embodiment of the modification which is a maintenance tas subject to a maintenance release. Further guidance on aircraft maintenance — modification and repair i contained in the Airworthiness Manual (Doc 9760).

Note— Also referred to as "alteration".

Modulation rate

The reciprocal of the unit interval measured in seconds. This rate is expressed in bauds.

Note— Telegraph signals are characterized by intervals of time of duration equal to or longer than th shortest or unit interval. The modulation rate (formerly telegraph speed) is therefore expressed as the inverse of the value of this unit interval. If, for example, the unit interval is 20 milliseconds, the modulation rate is 50 bauds.

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.

Note— When the mole is used, the elementary entities must be specified and may be atoms, molecules ions, electrons, other particles or specified groups of such particles.

Monitoring

A cognitive process to compare an actual to an expected state.

Note– Monitoring is embedded in the competencies for a given role within an aviation discipline, which serve as countermeasures in the threat and error management model. It requires knowledge, skills and attitudes to create a mental model and to take appropriate action when deviations are recognized.

Movement area

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

M-PSK symbol

One of the M possible phase shifts of the M-PSK modulated carrier representing a group of log2 M coded chips.

Multilateration (MLAT) System

A group of equipment configured to provide position derived from the secondary surveillance radar (SSR)

transponder signals (replies or squitters) primarily using time difference of arrival (TDOA) techniques. Additional information, including identification, can be extracted from the received signals.

Narcotics control

Measures to control the illicit movement of narcotics and psychotropic substances by air.

Nautical mile (NM)

The length equal to 1 852 meters exactly.

Navigable airspace

Airspace at and above the minimum flight altitudes prescribed by the GACAR, including airspace needed for safe takeoff and landing.

Navigation specification

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

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

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

Note 1— The Performance-based Navigation (PBN) Manual (Doc 9613), Volume II, contains detailed guidance on navigation specifications.

Note 2— The term RNP, previously defined as "a statement of the navigation performance necessary for operation within a defined airspace", has been removed from the ICAO Annex 6 as the concept of RNP has been overtaken by the concept of PBN. The term RNP is now solely used in the context of navigation specifications that require performance monitoring and alerting, e.g. RNP 4 refers to the aircraft and operating requirements, including a 4 NM lateral performance with on-board performance monitoring and alerting that are detailed in Doc9613.

Near limiting performance

As used in GACAR Part 60, means the performance level the operating engine must be required to achieve to have sufficient power to land a rotorcraft after experiencing a single-engine failure during takeoff of a multi-engine rotorcraft. The operating engine must be required to operate within at least 5 percent of the maximum RPM or temperature limits of the gas turbine or power turbine, or operate within at least 5 percent of the maximum drive train torque limits. Near limiting performance is based on the existing combination of density altitude, temperature, and rotorcraft gross mass.

Near-parallel runways

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

Necessary precautions

Verifications carried out by adequately trained staff members of the aircraft operator or the company operating on behalf of the aircraft operator, at the point of embarkation, in order to ensure that every person holds a valid travel document and, where applicable, the visa or residence permit required to enter the State of transit and/or receiving State. These verifications are designed to ensure that irregularities (e.g. obvious document alteration) are detected.

Net gradient

The net gradient of climb throughout these requirements is the expected gradient of climb diminished by the maneuver performance (i.e. that gradient of climb necessary to provide power to maneuver) and by the margin (i.e. that gradient of climb necessary to provide for those variations in performance which are not expected to be taken explicit account of operationally).

Network (N)

The word “network” and its abbreviation “N” in ISO 8348 are replaced by the word “subnetwork” and its abbreviation “SN”, respectively, wherever they appear in relation to the subnetwork layer packet data performance.

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 meter 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.

Next intended user

The entity that receives the aeronautical data or information from the aeronautical information service.

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.

Note— Civil twilight ends in the evening when the center of the sun's disc is 6 degrees below the horizor and begins in the morning when the center of the sun's disc is 6 degrees below the horizon.

Night vision goggles (NVG)

An appliance worn by a pilot that enhances a pilot's ability to maintain visual surface reference at night. NVG may be a component of a Night Vision Imaging System (NVIS).

Night vision imaging system (NVIS)

A system that uses image intensifier tubes to produce an enhanced image of a scene in light conditions too low for normal navigation and pilotage.

Night vision imaging system (NVIS) operation

The portion of a flight that occurs during the time period from 1 hour after sunset to 1 hour before sunrise where the pilot maintains visual surface reference using a night vision imaging system in an aircraft that is approved for such an operation.

Noise

Random variation in instrument output not associated with characteristics of the sample to which the instrument is responding, and distinguishable from its drift characteristics.

Non-congested hostile environment

A hostile environment outside a congested area.

Non-dispersive infrared analyser

An instrument that by absorption of infrared energy selectively measures specific components.

Non-hostileenvironment

An environment inwhich:

a)a safe forced landing can be accomplished because the surface and surrounding environment areadequate;

b)the helicopter occupants can be adequately protected from the elements;

c)search and rescue response/capability is provided consistent with anticipated exposure; and

d)the assessed risk of endangering persons or property on the ground is acceptable.

Note— Those parts of a congested area satisfying the above requirements are considered non-hostile.

Non-instrument runway

A runway intended for the operation of aircraft using visual approach procedures or an instrument approach procedure to a point beyond which the approach may continue in visual meteorological conditions.

Note— Visual meteorological conditions (VMC) are described in Chapter 3 of the ICAO Annex 2 — Rule of the Air.

Non-network communications

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

Nonprecision approach procedure

An instrument approach procedure designed for 2D instrument approach operations Type A

Non-volatile particulate matter (nvPM)

Emitted particles that exist at a gas turbine engine exhaust nozzle exit plane that do not volatilize when heated to a temperature of 350°C.

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.

North Pacific Area of Operation (NOPAC)

Pacific Ocean areas north of 40° N latitudes including NOPAC air traffic service (ATS) routes, and published Pacific Organized Track System (PACOTS) tracks between Japan and North America.

North Polar Area

The entire area north of 78° N latitude.

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.

Objective data

As used in GACAR Part 60, means quantitative data, acceptable to the President, used to evaluate a flight simulation training device (FSTD).

Observable behavior (OB)

A single role-related behaviour that can be observed and may or may not be measurable.

Observation (meteorological)

The evaluation of one or more meteorological elements.

Obstacle

All fixed (whether temporary or permanent) and mobile objects, or parts thereof, that:

a) are located on an area intended for the surface movement of aircraft; or

b) extend above a defined surface intended to protect aircraft in flight; or

c) stand outside those defined surfaces and that have been assessed as being a hazard to air navigation.

The following list contains definitions of terms that are used only in ICAO Annex 14, Volume II, with the meanings given below.

D. The largest overall dimension of the helicopter when rotor(s) are turning measured from the most forward position of the main rotor tip path plane to the most rearward position of the tail rotor tip path plane or helicopter structure.

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

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

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

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

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 limitation surfaces

A series of surfaces that define the volume of airspace at and around an aerodrome to be kept free of obstacles in order to permit the intended airplane operations to be conducted safely and to prevent the aerodrome from becoming unusable by the growth of obstacles around the aerodrome.

Obstacle/terrain data collection surface

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

Obstruction clearance plane

A plane sloping upward from the runway at a slope of 1:20 to the horizontal, and tangent to or clearing all obstructions within a specified area surrounding the runway as shown in a profile view of that area. In the plan view, the centerline of the specified area coincides with the centerline of the runway, beginning at the point where the obstruction clearance plane intersects the centerline of the runway and proceeding to a point at least 450 m from the beginning point. Thereafter the centerline coincides with the takeoff path over the ground for the runway (in the case of takeoffs) or with the instrument approach counterpart (for landings), or, where the applicable one of these paths has not been established, it proceeds consistent with turns of at least 1 200 m radius until a point is reached beyond which the obstruction clearance plane clears all obstructions. This area extends laterally 60 m on each side of the centerline at the point where the obstruction clearance plane intersects the runway and continues at this width to the end of the runway; then it increases uniformly to 150 m on each side of the centerline at a point 450 m from the intersection of the obstruction clearance plane with the runway; thereafter it extends laterally 150 m on each side of the center line.

Offset frequency simplex

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

Offshore operations

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

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.

One-engine-inoperative Cruise Speed

A speed within the certified operating limits of an airplane that is specified by the certificate holder and approved by the President for—

a)Calculating required fuel reserves needed to account for an inoperative engine,or

b)Determining whether an ETOPS alternate is within the maximum diversion time authorized for an ETOPS flight.

Operate-aircraft

With respect to aircraft, means use, cause to use, or authorize to use aircraft for the purpose of air navigation (except as provided in GACAR § 91.17(b)), including the piloting of aircraft with or without the right of legal control.

Operating base

The location from which operational control is exercised.

Note— An operating base is normally the location where personnel involved in the operation of th airplane work and the records associated with the operation are located. An operating base has a degree of permanency beyond that of a regular point of call.

Operating cycle

See flightcycle.

Operation

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

Note— Such activities could include, but would not be limited to, offshore operations, heli-hois operations or emergency medical service.

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.

Note— Such communications are normally required for the exchange of messages between aircraft and aircraft operating agencies.

Operational credit

A credit authorized for operations with an advanced aircraft enabling a lower aerodrome operating minimum than would normally be authorized for a basic aircraft, based upon the performance of advanced aircraft systems utilizing the available external infrastructure.

Operational flight plan

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

Operational personnel

Personnel involved in aviation activities who are in a position to report safety information.

Note— Such personnel include, but are not limited to: flight crews; air traffic controllers; aeronautical station operators; maintenance technicians; personnel of aircraft design and manufacturing organizations; cabin crews; flight dispatchers, apron personnel and ground handling personnel.

Operational planning

The planning of flight operations by an operator.

Operations in performance Class 1

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

Operations in performance Class 2

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

Operations in performance Class 3

Operations with performance such that, in the event of an engine failure at any time during the flight, a forced landing will be required.

Operations manual

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

Operations specifications

The authorizations including specific approvals, conditions and limitations associated with the air operator certificate and subject to the conditions in the operations manual.

Operator

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

Operator's Maintenance Control Manual

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

Note— Also referred to as Operator's Maintenance Manual.

Optimum conditions

The combinations of altitude and airspeed within the approved operating envelope defined in the airplane flight manual that provides the highest specific air range value at each reference airplane mass.

Optimum sampling point

The optimum sampling point of a received UAT bit stream is at the nominal center of each bit period, when the frequency offset is either plus or minus 312.5 kHz.

Organic carbon (OC)

Carbon volatilized in Helium while heating a quartz fibre filter sample to 870°C during thermal optical transmittance (TOT) analysis. Includes char formed during pyrolysis of some materials.

Organization responsible for the type design

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

Original trajectory

The original trajectory of an ACAS-equipped aircraft is that followed by the aircraft in the same encounter when it was not ACAS equipped.

Origination (aeronautical data or aeronautical inf

The creation of the value associated with new data or information or the modification of the value of existing data or information.

Originator (aeronautical data or aeronautical info

An entity that is accountable for data or information origination and/or from which the AIS organization receives aeronautical data and aeronautical information.

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.

Orphan aircraft type

An aircraft which has its Type Certificate revoked by the State of Design, and no longer has a designated State of Design in accordance with GACAR Part 21 and does not meet the requirements of the GACAR Part 21.

Orthometric height

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

Other Than Standard (OTS) CAT II

A Category II precision approach procedure conducted to a runway where some or all of the elements of the light system normally required for Category II operations are not present. Only operators specifically authorized by the President under GACAR Part 91 may conduct OTS CAT II operations.

Outer main gear wheel span (OMGWS)

The distance between the outside edges of the main gear wheels.

Overhaul

The disassembly, cleaning, inspection, repairing as necessary, reassembly and testing in accordance with standards and technical data which have been developed and documented by the holder of the type

certificate, supplemental type certificate, or a material, part, process, or appliance approved under GACAR Part 21.

Overpack

An enclosure used by a single shipper to contain one or more packages and to form one handling unit for convenience of handling and stowage.

Note— A unit load device is not included in this definition.

Over-the-top

The operation of an aircraft above a layer of clouds or other obscuring phenomena forming a ceiling.

Own aircraft

The aircraft fitted with the ACAS that is the subject of the discourse, which ACAS is to protect against possible collisions, and which may enter a maneuver in response to an ACAS indication.

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.

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.

Note— For radioactive material, see Part 2, paragraph 7.2 of the ICAO Doc 9284 Technical Instruction for the safe transport of dangerous goods by air.

Packet

The basic unit of data transfer among communication devices within the network layer (e.g. an ISO 8208 packet or a Mode S packet).

Parachute

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

Parachute landing area (PLA)

Any pre-determined area upon which parachutists or objects land during parachute operations. The center-point target of a PLA is expressed in nautical miles (NM) from the nearest Very High Frequency Omnidirectional Range (VOR) facility when 30 NM or less; or from the nearest aerodrome, town, or city depicted on the appropriate aeronautical chart, when the nearest VOR facility is more than 30 NM from the PLA.

Parachute operation

The performance of actions for the purpose of, or in support of, intentional parachute activities.

Parachutist

A person who intends to exit an aircraft while in flight using a parachute system to descend to the surface.

Partial rise time

The time as measured between the 5 and 30 per cent amplitude points on the leading edge of the pulse envelope, i.e. between points h and I on Figures 3-1 and 3-2 of the ICAO Annex 10, Vol I.

Partial usage sub-channelization (PUSC)

A technique in which the orthogonal frequency division multiplexing (OFDM) symbol subcarriers are divided and permuted among a subset of sub-channels for transmission, providing partial frequency diversity.

Particle loss

The loss of particles during transport through a sampling or measurement system component or due to instrument performance. Sampling and measurement system loss is due to various deposition mechanisms, some of which are particle size dependent.

Particle mass concentration

The mass of particles per unit volume of sample.

Particle mass emission index

The mass of particles emitted per unit of fuel mass used.

Particle number concentration

The number of particles per unit volume of sample.

Particle number emission index

The number of particles emitted per unit of fuel mass used.

Particle size distribution

A list of values or a mathematical function that represents particle number concentration according to size.

Parts and appliances

Any instrument, equipment, mechanism, part, apparatus, appurtenance, software or accessory, including communications equipment, that is used or intended to be used in operating or controlling an aircraft in flight; it shall include parts of an airframe, engine or propeller, or equipment used to maneuver the aircraft from the ground.

Parts per million (ppm)

The unit volume gas concentration of a gas per million unit volume of the gas mixture of which it is a part.

Parts per million carbon (ppmC)

The mole fraction of hydrocarbon multiplied by 106 measured on a methane-equivalence basis. Thus, 1 ppm of methane is indicated as 1 ppmC. To convert ppm concentration of any hydrocarbon to an equivalent ppmC value, multiply ppm gas concentration by the number of carbon atoms per molecule of the gas. For example, 1 ppm propane translates as 3 ppmC hydrocarbon; 1 ppm hexane as 6 ppmC hydrocarbon.

Pascal (Pa)

The pressure or stress of 1 newton per square meter.

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.

Passenger amenities

Facilities provided for passengers which are not essential for passenger processing.

Passenger Data Single Window

A facility that allows parties involved in passenger transport by air to lodge standardized passenger information (i.e. API, iAPI and/or PNR) through a single data entry point to fulfil all regulatory

requirements relating to the entry and/or exit of passengers that may be imposed by various agencies of the Contracting State.

Note—ThePassengerDataSingleWindowfacilitytosupportAPI/iAPItransmissionsdoesnotnecessarilyneed to be the same facility used to support PNR dataexchange.

Path following error (PFE)

That portion of the guidance signal error which could cause aircraft displacement from the desired course and/or glide path.

Path following noise (PFN)

That portion of the guidance signal error which could cause aircraft displacement from the mean course line or mean glide path as appropriate.

Pavement classification number (PCN)

A number expressing the bearing strength of a pavement.

Until 27 Nov 2024

Pavement classification rating (PCR)

A number expressing the bearing strength of a pavement.

As of 28 Nov 2024

Peak envelope power (PEP)

The peak power of the modulated signal supplied by the transmitter to the antenna transmission line.

Penetration fraction

The ratio of particle concentration downstream and upstream of a sampling system element.

Performance criteria

Statements used to assess whether the required levels of performance have been achieved for a competency. A performance criterion consists of an observable behaviour, condition(s) and a competency standard.

Performance model

An analytical tool or method validated from corrected flight test data that can be used to determine the SAR values for calculating the CO2 emissions evaluation metric value at the reference conditions.

Performance-based aerodrome operating minimum (PBAOM)

A lower aerodrome operating minimum, for a given take-off, approach or landing operation, than is available when using a basic aircraft.

Note 1 — The PBAOM is derived by considering the combined capabilities of the aircraft and availabl ground facilities. Additional guidance material on PBAOM may be found in the Manual of All-Weather Operations (Doc 9365).

Note 2— PBAOM may be based on operational credits.

Note 3— PBAOM are not limited to PBN operations.

Performance-based communication (PBC)

Communication based on performance specifications applied to the provision of air traffic services.

Note— An RCP specification includes communication performance requirements that are allocated t system components in terms of the communication to be provided and associated transaction time, continuity, availability, integrity, safety and functionality needed for the proposed operation in the context of a particular airspace concept.

Performance-based navigation (PBN)

Area navigation based on performance requirements for aircraft operating along an ATS route, on an instrument approach procedure or in a designated airspace.

Note— Performance requirements are expressed in navigation specifications (RNAV specification, RNI specification) in terms of accuracy, integrity, continuity, availability and functionality needed for the proposed operation in the context of a particular airspace concept.

Performance-based surveillance (PBS)

Surveillance based on performance specifications applied to the provision of air traffic services.

Note— An RSP specification includes surveillance performance requirements that are allocated to systen components in terms of the surveillance to be provided and associated data delivery time, continuity, availability, integrity, accuracy of the surveillance data, safety and functionality needed for the proposed operation in the context of a particular airspace concept.

Person

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 with disabilities

Any person whose mobility is reduced due to a physical incapacity (sensory or locomotor), an intellectual deficiency, age, illness or any other cause of disability when using transport and whose situation needs special attention and the adaptation to the person’s needs of the services made available to all passengers.

Physical layer

The lowest level layer in the Open Systems Interconnection protocol model. The physical layer is concerned with the transmission of binary information over the physical medium (e.g. VHF radio).

Physical layer protocol data unit (PPDU)

Data unit passed to the physical layer for transmission, or decoded by the physical layer after reception.

Physiological night's rest

10 hours of rest that encompasses the hours of 0100 and 0700 at the flight crew member's home base, unless the individual has acclimated to a different theater. If the flight crew member has acclimated to a different theater, the rest must encompass the hours of 0100 and 0700 at the acclimated location.

Pilot (to)

To manipulate the flight controls of an aircraft during flight time.

Pilot flying (PF)

The pilot whose primary task is to control and manage the flight path. The secondary tasks of the PF are to perform non-flight path related actions (radio communications, aircraft systems, other operational activities, etc.) and to monitor other crewmembers.

Pilot monitoring (PM)

The pilot whose primary task is to monitor the flight path and its management by the PF. The secondary tasks of the PM are to perform non–flight path related actions (radio communications, aircraft systems, other operational activities, etc.) and to monitor other crewmembers.

Pilot school

The holder of a pilot school certificate or a provisional pilot school certificate issued under GACAR Part 141.

Pilot time

That time in which a person—

a) Serves as a requiredpilot;

b) Receives training from an authorized instructor in an aircraft, flight simulation training device (FSTD), or aviation training device (ATD); or

c) Gives training as an authorized instructor from a flight crew member station in an aircraft or FSTD.

Pilotage

Navigation by visual reference to landmarks.

Pilot-controller system

Air-ground radiotelephony facilities implemented primarily to provide a means of direct communication between pilots and controllers.

Pilot-in-command

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

Pilot-in-command under supervision

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

Pitch setting

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 of no return

The last possible geographic point at which an aircraft can proceed to the destination aerodrome as well as to an available en-route alternate aerodrome for a given flight.

Point-in-space (PinS) visual segment

This is the segment of a helicopter PinS approach procedure from the MAPt to the landing location for a PinS “proceed visually” procedure. This visual segment connects the Point-in-space (PinS) to the landing location.

Note— The procedure design criteria for a PinS approach and the detailed design requirements for a visual segment are established in the Procedures for Air Navigation Services — Aircraft Operations (PANS-OPS, Doc 8168).

Point-in-space approach (PinS)

The Point-in-space approach is based on GNSS and is an approach procedure designed for helicopter only. It is aligned with a reference point located to permit subsequent flight maneuvering or approach and landing using visual maneuvering in adequate visual conditions to see and avoid obstacles.

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.

Portable oxygen concentrator

A medical device to assist a user of medical oxygen by separating oxygen from nitrogen and other gases contained in ambient air and dispensing it in concentrated form to the user.

Portrayal

Presentation of information to humans (ISO 19117, Geographic information on Portrayal).

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.

Positive RA

A resolution advisory that advises the pilot either to climb or to descend (applies to ACAS II).

Post spacing

Angular or linear distance between two adjacent elevation points.

Potential threat

An intruder deserving special attention either because of its close proximity to own aircraft or because successive range and altitude measurements indicate that it could be on a collision or near-collision course with own aircraft. The warning time provided against a potential threat is sufficiently small that a traffic advisory (TA) is justified but not so small that a resolution advisory (RA) would be justified.

Power measurement point (PMP)

A cable connects the antenna to the UAT equipment. The PMP is the end of that cable that attaches to the antenna. All power measurements are considered as being made at the PMP unless otherwise specified. The

cable connecting the UAT equipment to the antenna is assumed to have 3 dB of loss.

Powered parachute

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

Powered-lift

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

Powerplant

The system consisting of all the engines, drive system components (if applicable), and propellers (if installed), their accessories, ancillary parts, and fuel and oil systems installed on an aircraft but excluding the rotors for a helicopter.

Practical test

A test on the areas of operations for an airman certificate, rating, or authorization that is conducted by having the applicant respond to questions and demonstrate the required proficiency in the skills prescribed for that certificate, rating, or authorization in an actual or simulated operating environment.

Precision

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

Note— In reference to geodetic surveys, precision is a degree of refinement in performance of an operatio or a degree of perfection in the instruments and methods used when taking measurements.

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.

Prepare-Dangerous goods

For purposes of GACAR Part 109, to classify, mark, label, and package dangerous goods for transport by air.

President

The President of the GACA or any person to whom he has delegated his authority in the matter concerned.

Pressure-altitude

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

Prevailing visibility

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

Note— This value may be assessed by human observation and/or instrumented systems. Whe instruments are installed, they are used to obtain the best estimate of the prevailing visibility.

Preventive maintenance

Simple or minor preservation operations, transit inspection/pre-flight inspection including fluid charging and the replacement of small standard parts not involving complex assembly operations.

Note— Also referred to as prefilight/transit inspection.

Preventive RA

A resolution advisory that advises the pilot to avoid certain deviations from the current flight path but does not require any change in the current flight path.

Primary frequency

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

Primary means of communication

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

Primary runway(s)

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

Principal base of operations

The primary operating location of a certificate holder as established by the certificate holder.

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 published altitude/height used in defining the vertical profile of a flight procedure, at or above the minimum obstacle clearance altitude/height where established.

Procedure turn

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

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

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

Product

For purposes of GACAR Part 21, an aircraft, aircraft engine, or aircraft propeller.

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.

Programmed hours

The hours of airman training to be administered by a certificate holder, as prescribed by regulation.

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.

Promulgated information incident

An incident that involves significantly incorrect, inadequate, or misleading information or aeronautical data promulgated in an aeronautical information publication, map, chart, or otherwise provided for the operation of an aircraft.

Promulgation

The act of formally notifying official information to the aviation community.

Propeller

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. Propellers include control components normally supplied by their manufacturers, but do not include main and auxiliary rotors or rotating airfoils of engines.

Proportional guidance sector

The volume of airspace within which the angular guidance information provided by a function is directly proportional to the angular displacement of the airborne antenna with respect to the zero angle reference.

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.

Protection area

A defined area surrounding a stand intended to reduce the risk of damage from helicopters accidentally diverging from the stand.

Pseudorandom message data block

Several UAT requirements state that performance will be tested using pseudorandom message data blocks.

Pseudorandom message data blocks should have statistical properties that are nearly indistinguishable from those of a true random selection of bits. For instance, each bit should have (nearly) equal probability of being a ONE or a ZERO, independent of its neighboring bits. There should be a large number of such pseudorandom message data blocks for each message type (Basic ADS-B, Long ADS-B or Ground Uplink) to provide sufficient independent data for statistical performance measurements. See the Section 2.3 of Part I of the Manual on the Universal Access Transceiver (UAT) ICAO Doc 9861 for an example of how to provide suitable pseudorandom message datablocks.

Pseudo-range

The difference between the time of transmission by a satellite and reception by a GNSS receiver multiplied by the speed of light in a vacuum, including bias due to the difference between a GNSS receiver and satellite time reference.

Psychoactive substances

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

Public authorities

The agencies or officials of a Contracting State responsible for the application and enforcement of the particular laws and regulations of that State which relate to any aspect of these Standards and Recommended Practices.

Public health emergency of international concern

An extraordinary event which is determined, as provided in the International Health Regulations (2005) of the World Health Organization: (i) to constitute a public health risk to other States through the international spread of disease and (ii) to potentially require a coordinated international response.

Public health risk

A likelihood of an event that may affect adversely the health of human populations, with an emphasis on one which may spread internationally or may present a serious and direct danger.

Published repair data

Instructions for accomplishing repairs, which are published for general use in structural repair manuals and service bulletins (or equivalent types of documents).

Pulse amplitude

The maximum voltage of the pulse envelope, i.e. A in Figure 3-1, the ICAO Annex 10, Vol 1.

Pulse code

The method of differentiating between W, X, Y and Z modes and between FA and IA modes.

Pulse decay time

The time as measured between the 90 and 10 per cent amplitude points on the trailing edge of the pulse Envelope, i.e., between points e and g on Figure 3-1 of the ICAO Annex 10, Vol I.

Pulse duration

The time interval between the 50 per cent amplitude point on leading and trailing edges of the pulse envelope, i.e., between points b and f on Figure 3-1, the ICAO Annex 10, Vol 1.

Pulse rise time

The time as measured between the 10 and 90 per cent amplitude points on the leading edge of the pulse envelope, i.e., between points a and c on Figure 3-1 of the ICAO Annex 10, Vol I.

Qualification level

As used in GACAR Part 60, means the categorization of a flight simulation training device (FSTD) established by the President based on the FSTD's demonstrated technical and operational capabilities as prescribed in this part.

Qualification performance standards (QPS)

As used in GACAR Part 60, means the collection of procedures and criteria used when conducting objective and subjective tests, to establish flight simulation training device (FSTD) qualification levels. The QPS are published in the appendixes to Title 14, Code of Federal Regulations of the United States part 60, as follows:

Appendix A, for Airplane Simulators;

Appendix B, for Airplane Flight Training Devices;

Appendix C, for Rotorcraft Simulators;

Appendix D, for Rotorcraft Flight Training Devices; and

Appendix E, for Quality Management Systems for Flight Simulation Training Devices.

Quality

Degree to which a set of inherent characteristics fulfils requirements (ISO 9000, Quality Management

Systems — Fundamentals and Vocabulary).

Note 1— The term "quality" can be used with adjectives such as poor, good or excellent.

Note 2— "Inherent", as opposed to "assigned", means existing in something, especially as a permanen characteristic.

Quality assurance

Part of quality management focused on providing confidence that quality requirements will be fulfilled (ISO 9000, Quality Management Systems — Fundamentals and Vocabulary).

Quality control

Part of quality management focused on fulfilling quality requirements (ISO 9000, Quality Management Systems — Fundamentals and Vocabulary).

Quality management

Coordinated activities to direct and control an organization with regard to quality (ISO 9000, Quality Management Systems — Fundamentals and Vocabulary).

Quality of service (QOS)

The information relating to data transfer characteristics used by various communications protocols to achieve various levels of performance for network users.

Quality system

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

Quarantine

The restriction of activities and/or separation from others of suspect persons who are not ill or of suspect baggage, containers, conveyances or goods in such a manner as to prevent the possible spread of infection or contamination.

RA sense

The sense of an ACAS II RA is "upward" if it requires climb or limitation of descent rate and "downward" if it requires descent or limitation of climb rate. It can be both upward and downward simultaneously if it requires limitation of the vertical rate to a specified range.

Note— The RA sense may be both upward and downward when, having several simultaneous threats ACAS generates an RA aimed at ensuring adequate separation below some threat(s) and above some

other threat(s).

Radial

A magnetic bearing extending from a VOR/VORTAC/TACAN.

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 bearing

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

Radio direction finding (RR S1.12)

Radio determination 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.

Note— The aeronautical application of radio direction finding is in the aeronautical radio navigatio service.

Radio navigation service

A service providing guidance information or position data for the efficient and safe operation of aircraft supported by one or more radio navigation aids.

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.

Radiotelephony-General purpose system (GP)

Air-ground radiotelephony facilities providing for all categories of traffic listed in 5.1.8, the ICAO Annex 10 Vol II

Note— In this system communication is normally indirect, i.e. exchanged through the intermediary of a third person.

Rated air traffic controller

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

Rated coverage

The area surrounding an NDB within which the strength of the vertical field of the ground wave exceeds the minimum value specified for the geographical area in which the radio beacon is situated.

Note— The above definition is intended to establish a method of rating radio beacons on the norma coverage to be expected in the absence of sky wave transmission and/or anomalous propagation from the radio beacon concerned or interference from other LF/MF facilities, but taking into account the atmospheric noise in the geographical area concerned.

Rated thrust

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

Rating

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

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.

Real-world aerodrome

As used in GACAR Part 60 in reference to aerodrome visual models, means a computer-generated visual depiction of an existing aerodrome.

Rebuilding

The disassembly, cleaning, inspecting, repairing as necessary, reassembly, and testing to the same tolerances

and limits as a new item, using either new parts or used parts that either conform to new part tolerances and limits or to approved oversized or undersized dimensions.

Recertification

Certification of an aircraft with or without a revision to its certification noise levels, to a Standard different to that to which it was originally certificated.

Record

Any writing, drawing, map, recording, tape, film, photograph, or other documentary material by which information is preserved or conveyed in any format, including, but not limited to, paper, microfilm, identification plates, stamped marks, bar codes, and electronic formats. It can either be separate from, attached to, or inscribed on any product, part, appliance, or material.

Recreational aviation activity

Noncommercial aviation activities that are carried out for the primary purpose of the recreational enjoyment of the participants and spectators.

Recurrent training

Periodic training required for a qualified airman in the specific position and/or operation in which the airman serves.

Reed-Solomon code

An error correction code capable of correcting symbol errors. Since symbol errors are collections of bits, these codes provide good burst error correction capabilities.

Reference direction

In degrees, the direction of sound incidence specified by the manufacturer of the microphone, relative to a sound incidence angle of 0°, for which the free-field sensitivity level of the microphone system is within specified tolerance limits.

Reference gas

A mixture of gases of specified and known composition used as the basis for interpreting instrument response in terms of the gas concentration of the gas to which the instrument is responding.

Reference geometric factor

An adjustment factor based on a measurement of airplane fuselage size derived from a two-dimensional

projection of the fuselage.

Reference humidity

The relationship between temperature and reference humidity is defined as follows:

—at temperatures at and below ISA, 80 per cent relative humidity,

—at temperatures at and above ISA + 28° C, 34 per cent relative humidity,

—at temperatures between ISA and ISA + 28° C, the relative humidity varies linearly between the humidity specified for those temperatures.

Reference level difference

In decibels, for a stated frequency, the level difference measured on a level range for an electrical input signal corresponding to the calibration sound pressure level, adjusted as appropriate, for the level range.

Reference level range

In decibels, the level range for determining the acoustical sensitivity of the measurement system and containing the calibration sound pressure level.

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.

Note— Methods of measuring reference pressure ratio are given in Appendix 1.

Regional air navigation agreement

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

Register

The Saudi National Aircraft Register maintained by the GACA to register national civil aircraft or aircraft engines.

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.

Regulated agent

An agent, freight forwarder or any other entity who conducts business with an operator and provides security controls that are accepted or required by the appropriate authority in respect of cargo or mail.

Rejected take-off area

A defined area on a heliport suitable for helicopters operating in performance class 1 to complete a rejected take- off.

Rejected takeoff distance required (RTODR)

The horizontal distance required from the start of the takeoff to the point where the helicopter comes to a full stop following an engine failure and rejection of the takeoff at the takeoff decision point.

Related aircraft

Any two or more aircraft of the same make with either the same or different type certificates that have been demonstrated and determined by the President to have commonality to the extent that credit between those aircraft may be applied for flight crew member training, checking, recent experience, operating experience, operating cycles, and line operating flight time for consolidation of knowledge and skills.

Related aircraft differences training

The flight crew member training required for aircraft with different type certificates that have been designated as related by the President.

Relay time

The relay time of a COM center is the elapsed time between the instant that a message has been completely received at that center and the instant that it has been completely retransmitted on an outgoing circuit.

Release of goods

The action by the customs authorities to permit goods undergoing clearance to be placed at the disposal of the persons concerned.

Reliable link service (RLS)

A data communications service provided by the subnetwork which automatically provides for error control over its link through error detection and requested retransmission of signal units found to be in error.

Relief

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

Relief flights

Flights operated for humanitarian purposes which carry relief personnel and relief supplies such as food, clothing, shelter, medical and other items during or after an emergency and/or disaster and/or are used to evacuate persons from a place where their life or health is threatened by such emergency and/or disaster to a safe haven in the same State or another State willing to receive such persons.

Action by the public authorities of a State, in accordance with its laws, to direct a person to leave that State.

Repatriation flights

Special flights organized, facilitated, or supported by a State for the exclusive purpose of transporting that State's nationals, and other eligible persons, from foreign countries to that State, or a safe third country, through operations by State aircraft, humanitarian flights or chartered/non-scheduled commercial flights.

Remote co-pilot

A licensed remote pilot serving in any piloting capacity other than as remote pilot-in-command but excluding a remote pilot who is in the remote pilot station for the sole purpose of receiving flight instruction.

Remote flight crew member

A licensed flight crew member charged with duties essential to the operation of a remotely piloted aircraft system during a flight duty period.

Remote pilot

A person charged by the operator with duties essential to the operation of a remotely piloted aircraft and who manipulates the flight controls, as appropriate, during flight time.

Remote pilot station (RPS)

The component of the remotely piloted aircraft system containing the equipment used to pilot the remotely piloted aircraft.

Remote pilot-in-command

The remote pilot designated by the operator as being in command and charged with the safe conduct of a flight.

Remotely piloted aircraft (RPA)

An unmanned aircraft which is piloted from a remote pilot station.

Remotely piloted aircraft system (RPAS)

A remotely piloted aircraft, its associated remote pilot station(s), the required command and control links and any other components as specified in the type design.

Removal of a person

Action by the public authorities of a State, in accordance with its laws, to direct a person to leave that State.

Removal order

A written order served by a State on the operator on whose flight an inadmissible person travelled into that State, directing the operator to remove that person from its territory.

Rendering (a Certificate of Airworthiness) valid

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

Rendering (a license) valid

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

Repair

The restoration of an aircraft, engine, propeller or associated part to an airworthy condition in accordance with the appropriate airworthiness requirements, after it has been damaged or subjected to wear.

Repeatability

The closeness with which a measurement upon a given invariant sample can be reproduced in short-term repetitions of the measurement with no intervening instrument adjustment.

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.

Reply efficiency

The ratio of replies transmitted by the transponder to the total of received valid interrogations.

Report time

The time that the certificate holder requires a flight crew member to report for an assignment.

Reporting point

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

Requalification training

The training required for crew members previously trained and qualified, but who have become unqualified due to not having met, within the required period, the applicable line check, recurrent training, or proficiency check requirements.

Required communication performance (RCP)

A statement of the performance requirements for operational communication in support of specific ATM functions (see the Manual on Required Communication Performance (RCP) ICAO Doc 9869).

Required communication performance (RCP) specification

A set of requirements for air traffic service provision and associated ground equipment, aircraft capability, and operations needed to support performance-based communication.

Required communication performance type (RCP type)

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

Required navigation performance (RNP) specification

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

Required rate

For the standard pilot model, the required rate is that closest to the original rate consistent with the RA.

Required surveillance performance (RSP) specification

A set of requirements for air traffic service provision and associated ground equipment, aircraft capability, and operations needed to support performance-based surveillance.

Requirement

Need or expectation that is stated, generally implied or obligatory (ISO 9000, Quality Management Systems — Fundamentals and Vocabulary).

Note 1— "Generally implied" means that it is custom or common practice for the organization, it customers and other

interested parties, that the need or expectation under consideration is implied.

Note 2— A qualifier can be used to denote a specific type of requirement, e.g. product requirement, quality management requirement, customer requirement.

Note 3— A specified requirement is one which is stated, for example, in a document.

Note 4— Requirements can be generated by different interested parties.

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 center (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 subcenter (RSC)

A unit subordinate to a rescue coordination center, established to complement the latter according to particular provisions of the responsible authorities.

Reserve availability period

A duty period during which a certificate holder requires a flight crew member on short call reserve to be available to receive an assignment for a flight duty period.

Reserve flight crew member

A flight crew member who a certificate holder requires to be available to receive an assignment for duty.

Residual error rate

The ratio of incorrect, lost and duplicate subnetwork service data units (SNSDUs) to the total number of SNSDUs that were sent.

Resolution

The smallest change in a measurement which can be detected.

Resolution advisory (RA)

An indication given to the flight crew recommending: a) a maneuver intended to provide separation from all threats; or b) a maneuver restriction intended to maintain existing separation.

Resolution advisory complement (RAC)

Information provided by one ACAS to another via a Mode S interrogation in order to ensure complementary maneuvers by restricting the choice of maneuvers available to the ACAS receiving the RAC.

Resolution advisory strength

The magnitude of the maneuver indicated by the RA. An RA may take on several successive strengths before being cancelled. Once a new RA strength is issued, the previous one automatically becomes void.

Resolution message

The message containing the resolution advisory complement (RAC).

Response

The change in instrument output signal that occurs with change in sample gas concentration.

Rest facility

A bunk or seat accommodation installed in an aircraft that provides a flight crew member with a sleep opportunity.

a) Class 1 rest facility means a bunk or other surface that allows for a flat sleeping position and is located separate from both the flight deck and passenger cabin in an area that is temperature-controlled, allows the flight crew member to control light, and provides isolation from noise anddisturbance.

b) Class 2 rest facility means a seat in an aircraft cabin that allows for a flat or near flat sleeping position; is separated from passengers by a minimum of a curtain to provide darkness and some sound mitigation; and is reasonably free from disturbance by passengers or flight crewmembers.

c) Class 3 rest facility means a seat in an aircraft cabin or flight deck that reclines at least 40 degrees and provides leg and footsupport.

Rest period

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

Restricted area

An airspace of defined dimensions, above the land areas or territorial waters of a State, within which the

flight of aircraft is restricted in accordance with certain specified conditions.

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.

Reversed sense RA

A resolution advisory that has had its sense reversed.

Rise time

The time required for the output signal to pass from 10 per cent to 90 per cent of the final change in the output signal when a reference material is abruptly applied to the automatic measuring system initially in the basic state. (This term is only applicable for an online analyzer).

Risk assessment

The process of hazard identification, risk analysis and risk evaluation.

Risk control

A means to reduce or eliminate the effects of hazards.

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

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 that 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 emergency medical service (REMS)

A flight, or sequence of flights, with a patient or medical personnel on board, for the purpose of medical transportation by rotorcraft from a site other than an aerodrome to an aerodrome. A REMS operation includes, but is not limited to—.

a) Flights conducted to position the rotorcraft at the site at which a patient or donor organ will be pickedup.

b) Flights conducted to reposition the rotorcraft after completing the patient, or donor organ transport.

c) Flights initiated for the transport of a patient or donor organ that are terminated due to weather or other reasons.

Rotorcraft external-load operations

The operation of a rotorcraft with a load that extends outside the rotorcraft fuselage, or is carried or suspended beneath the rotorcraft.

Rotorcraft-load combination

The combination of a rotorcraft and an external load, including the external-load attaching means.

Route (AFTN)

The path followed by a particular channel of a circuit.

Route segment

A route or portion of route usually flown without an intermediate stop.

Route stage

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

Routing (AFTN)

The chosen itinerary to be followed by messages on the AFTN between acceptance and delivery.

Routing Directory

A list in a communication center indicating for each addressee the outgoing circuit to be used.

Routing List

A list in a communication center indicating for each addressee the outgoing circuit to be used.

RPA observer

A trained and competent person designated by the operator who, by visual observation of the remotely piloted aircraft, assists the remote pilot in the safe conduct of the flight.

Runway

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

Runway condition assessment matrix (RCAM)

A matrix allowing the assessment of the runway condition code, using associated procedures, from a set of observed runway surface condition(s) and pilot report of braking action.

Runway condition code (RWYCC)

A number describing the runway surface condition to be used in the runway condition report.

Note— The purpose of the runway condition code is to permit an operational airplane performanc calculation by the flight crew. Procedures for the determination of the runway condition code are described in the PANS- Aerodromes (Doc 9981).

Runway condition report(RCR)

A comprehensive standardized report relating to runway surface condition(s) and its effect on the airplane landing and take-offperformance.

Runway end safety area(RESA)

An area symmetrical about the extended runway center line and adjacent to the end of the strip primarily intended to reduce the risk of damage to an airplane 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 incursion

Any occurrence at an aerodrome involving the incorrect presence of an aircraft, vehicle or person on the protected area of a surface designated for the landing and take-off of aircraft (Doc 9870 — Manual on th Prevention of Runway Incursions).

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 surface condition(s)

A description of the condition(s) of the runway surface used in the runway condition report which establishes the basis for the determination of the runway condition code for airplane performance purposes.

Note 1 — The runway surface conditions used in the runway condition report establish the performance requirements

between the aerodrome operator, airplane manufacturer and airplane operator.

Note 2— Aircraft de-icing chemicals and other contaminants are also reported but are not included in th list of runway surface condition descriptors because their effect on runway surface friction characteristics and the runway condition code cannot be evaluated in a standardized manner.

Note 3 — Procedures on determining runway surface conditions are available in the PANS-Aerodrome (Doc 9981).

a) *Dry runway.* A runway is considered dry if its surface is free of visible moisture and not contaminated within the area intended to be used.

b) *Wet runway.* The runway surface is covered by any visible dampness or water up to and including 3 mm deep within the intended area of use.

c) *Slippery wet runway.* A wet runway where the surface friction characteristics of a significant portion of the runway have been determined to be degraded.

d) Contaminated *runway.* A runway is contaminated when a significant portion of the runway surface area (whether in isolated areas or not) within the length and width being used is covered by one or more of the

substances listed in the runway surface condition descriptors.

Note— Procedures on determination of contaminant coverage on runway are available in th PANS-Aerodromes (Doc 9981).

e) *Runway surface condition descriptors.* One of the following elements on the surface of the runway:

Note— The descriptions for e) i) to viii) are used solely in the context of the runway condition report an are not intended to supersede or replace any existing WMO definitions.

i) *Compacted snow.* Snow that has been compacted into a solid mass such that airplane tires, at operating pressures and loadings, will run on the surface without significant further compaction or rutting of the surface.

ii) *Dry snow.* Snow from which a snowball cannot readily be made.

iii) *Frost.* Frost consists of ice crystals formed from airborne moisture on a surface whose temperature is below freezing. Frost differs from ice in that the frost crystals grow independently and therefore have a more granular texture.

Note 1 — Below freezing refers to air temperature equal to or less than the freezing point of water (

degree Celsius).

Note 2— Under certain conditions frost can cause the surface to become very slippery and it is ther reported appropriately as reduced braking action.

iv) *Ice.* Water that has frozen or compacted snow that has transitioned into ice, in cold and dry conditions.

v) *Slush.* Snow that is so water-saturated that water will drain from it when a handful is picked up or will splatter if stepped on forcefully.

vi) *Standing water*. Water of depth greater than 3 mm.

Note— Running water of depth greater than 3 mm is reported as standing water by convention.

vii) *Wet ice.* Ice with water on top of it or ice that is melting.

Note— Freezing precipitation can lead to runway conditions associated with wet ice from an airplan performance point of view. Wet ice can cause the surface to become very slippery. It is then reported appropriately as reduced braking action in line with procedures in the PANS-Aerodromes (Doc 9981).

viii) *Wet snow.* Snow that contains enough water content to be able to make a well-compacted, solid snowball, but water will not squeeze out.

Note— Applicable as of 5 November 2020.

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 visual range (RVR)

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

Runway/taxiway excursion

Any occurrence at any aerodrome involving the departure, wholly or partly, of an aircraft from the runway/taxiway in use during take-off, a landing run, taxiing or maneuvering.

Runway-holding position

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

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

Runway-type FATO

A FATO having characteristics similar in shape to a runway.

Safe forced landing

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

Safety

The state in which risks associated with aviation activities, related to, or in direct support of the operation of aircraft, are reduced and controlled to an acceptable level.

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 assessment

An element of the risk management process of an SMS that is used to assess safety concerns arising from, inter alia, deviations from standards and applicable regulations, identified changes at an aerodrome or when any other safety concerns arise.

Safety assurance

Processes within the SMS that function systematically to ensure the performance and effectiveness of safety risk controls and that the organization meets or exceeds its safety objectives through the collection, analysis, and assessment of information.

Safety data

A defined set of facts or set of safety values collected from various aviation related sources which when analyzed is used to maintain or improve safety.

Safety directive

As used in the context of light-sport aircraft (LSA) means a directive issued by a manufacturer of an LSA that is intended to correct an existing unsafe condition.

Safety information

Safety data processed, organized or analyzed in a given context so as to make it useful for safety management

purposes.

Safety link

In the context of aircraft banner towing operations under GACAR Part 133, a link contained in the towing apparatus that is strong enough for towing but has low enough breaking strength to protect the aircraft and pilot in the event of an accidental overload.

Safety management system (SMS)

A systematic approach to managing safety, including the necessary organizational structures, accountability, responsibilities, policies and procedures.

Safety manager

The responsible individual and focal point for the implementation and maintenance of an effective SMS. The safety manager directly reports to the accountable executive.

Safety objective

A brief, high-level statement of safety achievement or desired outcome to be accomplished by the State safety programme or service provider’s safety management system.

Safety oversight

A function performed by a State to ensure that individuals and organizations performing an aviation activity comply with safety-related national laws and regulations.

Safety performance

A State or a service provider’s safety achievement as defined by its safety performance targets and safety performance indicators.

Safety performance indicator

A data-based parameter used for monitoring and assessing safety performance.

Safety performance target

The planned or intended objective for safety performance indicator(s) over a given period.

Safety policy

The aviation organization's documented commitment to safety, which defines its safety objectives and the

accountabilities and responsibilities of its employees in regards to safety.

Safety promotion

A combination of training and communication of safety information to support the implementation and operation of an SMS in an organization.

Safety recommendation

A proposal of an accident investigation authority based on information derived from an investigation, made with the intention of preventing accidents or incidents and which in no case has the purpose of creating a presumption of blame or liability for an accident or incident. In addition to safety recommendations arising from accident and incident investigations, safety recommendations may result from diverse sources, including safety studies.

Safety recommendation of global concern (SRGC)

A safety recommendation regarding a systemic deficiency having a probability of recurrence, with significant consequences at a global level, and requiring timely action to improve safety.

Note— The Manual of Aircraft Accident and Incident Investigation (Doc 9756), Part IV —Reportir contains the criteria for a recommendation to be classified as an SRGC.

Safety risk

The predicted probability and severity of the consequences or outcomes of a hazard.

Safety risk management

The process of incorporating defenses, preventive controls or recovery measures to lower the severity and/or likelihood of a hazard’s projected consequence.

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.

Satellite-based augmentation system (SBAS)

A wide coverage augmentation system in which the user receives augmentation information from a satellite-based transmitter.

Satisfactory evidence

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

Screening

The application of technical or other means which are intended to identify and/or detect weapons, explosives or other dangerous devices, articles or substances which may be used to commit an act of unlawful interference.

Note— Certain dangerous articles or substances are classified as dangerous goods in the ICAO Annex 18 and the associated Technical Instructions for the Safe Transport of Dangerous Goods by Air (Doc 9284) and must be transported in accordance with those instructions. In addition, the Aviation Security Manual (Doc 8973 — Restricted) provides a list of prohibited items that must never be carried in the cabin of an aircraft.

Sea level engine

A reciprocating aircraft engine which, under standard atmospheric conditions, is capable of producing its rated takeoff power only at sea level.

Search

An operation normally coordinated by a rescue coordination center or rescue subcenter 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 center, 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 center, rescue subcenter or alerting post.

Search and rescue unit

A mobile resource composed of trained personnel and provided with equipment suitable for the expeditious conduct of search and rescue operations.

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.

Secondary frequency

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

Secondary surveillance radar (SSR)

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

Note— The requirements for interrogators and transponders are specified in the ICAO Annex 10 Volum IV, Chapter 3.

Security audit

An in-depth compliance examination of all aspects of the implementation of the national civil aviation security programme.

Security control

A means by which the introduction of weapons, explosives or other dangerous devices, articles or substances which may be used to commit an act of unlawful interference can be prevented.

Security culture

A set of security-related norms, values, attitudes and assumptions that are inherent in the daily operation of an organization and are reflected by the actions and behaviours of all entities and personnel within the organization.

Security equipment

Devices of a specialized nature for use, individually or as part of a system, in the prevention or detection of

acts of unlawful interference with civil aviation and its facilities.

Security inspection

An announced or unannounced examination of the effectiveness of the implementation of specific security measures.

Security restricted area

Those areas of the airside of an airport which are identified as priority risk areas where in addition to access control, other security controls are applied.

Security survey

An evaluation of security needs including the identification of vulnerabilities which could be exploited to carry out an act of unlawful interference, and the recommendation of corrective actions.

Security test

A covert or overt trial of an aviation security measure which simulates an attempt to commit an unlawful act.

Segment

A portion of a message that can be accommodated within a single MA/MB field in the case of a standard length message, or MC/MD field in the case of an extended length message. This term is also applied to the Mode S transmissions containing these fields.

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.

Selective availability (SA)

A set of techniques for denying the full accuracy and selecting the level of positioning, velocity and time accuracy of GPS available to users of the standard positioning service signal.

Note— GPS SA was discontinued at midnight on 1 May 2000.

Self-sustaining powered sailplane

A powered airplane with available engine power which allows it to maintain level flight but not to take off under its own power.

Semi-automatic relay installation

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

Series of flights

Series of flights are consecutive flights that:

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

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

Serious incident

An incident involving circumstances indicating that there was a high probability of an accident and associated with the operation of an aircraft which, in the case of a manned aircraft, takes place between the time any person boards the aircraft with the intention of flight until such time as all such persons have disembarked, or in the case of an unmanned aircraft, takes place between the time the aircraft is ready to move with the purpose of flight until such time as it comes to rest at the end of the flight and the primary propulsion system is shut down.

Note 1— The difference between an accident and a serious incident lies only in the result.

Note 2— Examples of serious incidents can be found in the ICAO Annexure 13, Attachment C.

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

As used in GACAR Part 147, means to perform functions that assure continued operation of an aircraft, system, or component in an airworthy condition.

Service data unit (SDU)

A unit of data transferred between adjacent layer entities, which is encapsulated within a protocol data unit (PDU) for transfer to a peer layer.

Service flow

A unidirectional flow of media access control layer (MAC) service data units (SDUs) on a connection that is providing a particular quality of service (QoS).

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.

Set of aircraft

Aircraft that share similar performance characteristics, such as similar airspeed and altitude operating envelopes, similar handling characteristics, and the same number and type of propulsion systems.

Shipboard heliport

A heliport located on a ship that may be purpose or non-purpose-built. A purpose-built shipboard heliport is one designed specifically for helicopter operations. A non-purpose-built shipboard heliport is one that utilizes an area of the ship that is capable of supporting a helicopter but not designed specifically for that task.

Shipper

As used in GACAR Part 109, means any person who offers dangerous goods for transportation by air.

Short-call reserve

A period of time in which a flight crew member is assigned to a reserve availability period.

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 requires otherwise, to demonstrate to the satisfaction of the President.

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.

SIGMET information

Information issued by a meteorological watch office concerning the occurrence or expected occurrence of specified en-route weather and other phenomena in the atmosphere that may affect the safety of aircraft operations.

Sign

a) Fixed message sign. A sign presenting only one message.

b) Variable message sign. A sign capable of presenting several predetermined messages or no message, as applicable.

Sign a maintenance release (to)

To certify that maintenance work has been completed satisfactorily in accordance with appropriate airworthiness requirements, by issuing the maintenance release referred to in the ICAO Annex 6 (in the case of a release not issued by an approved maintenance organization) or the ICAO Annex 8 (in the case of a release issued by an approved maintenance organization).

Signal area

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

Signal reliability

The probability that a signal-in-space of specified characteristics is available to the aircraft.

Note— This definition refers to the probability that the signal is present for a specified period of time.

Signalman

A person providing marshaling signals to crew members or other persons taxiing or towing an aircraft on the ground.

Significant

In the context of the medical provisions in Chapter 6 of the ICAO Annex 1, significant means to a degree or of a nature that is likely to jeopardize flight safety.

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.

Note— There are three categories of significant points: ground-based navigation aid, intersection and waypoint. In the context of this definition, intersection is a significant point expressed as radials, bearings and/or distances from ground-based navigation aids.

Simplex

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

Note— In application to the aeronautical mobile service this method may be subdivided as follows:

a)single channel simplex;

b)double channel simplex;

c)offset frequency simplex.

Single channel simplex

Simplex using the same frequency channel in each direction.

Single Window

A facility that allows parties involved in trade and transport to lodge standardized information and documents with a single entry point to fulfil all import, export, and transit-related regulatory requirements. If information is electronic then individual data elements should only be submitted once.

Slot

One of a series of consecutive time intervals of equal duration. Each burst transmission starts at the beginning of a slot.

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.

Small airplane

An airplane of a maximum certificated take-off mass of 5 700 kg or less.

Small aircraft

Any airplane that is not a large airplane.

Small unmanned aircraft

An unmanned aircraft weighing less than 55 pounds on takeoff, including everything that is on board or otherwise attached to the aircraft.

Small unmanned aircraft system (small UAS)

A small unmanned aircraft and its associated elements (including communication links and the components that control the small unmanned aircraft) that are required for the safe and efficient operation of the small unmanned aircraft in the national airspace system.

S_{max}

Maximum desired VHF data broadcast signal power at the VHF data broadcast receiver input. This power at the receiver input is computed from the maximum RF field strength defined in ICAO Annex 10, Vol. I, Chapter 3, 3.7.3.5.4.4 for the desired VHF data broadcast signal as received by an ideal isotropic antenna minus the minimum aircraft implementation loss. It is used to determine the VHF data broadcast interference immunity to adjacent channel signals (ICAO Annex 10, Vol I, 3.6.8.2.2.6) and to signals from sources outside the 108.000 – 117.975 MHz band (ICAO Annex 10, Vol I, 3.6.8.2.2.8).

Smoke

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

Smoke Number

The dimensionless term quantifying smoke emissions (see ICAO Annex 16, Vol I, 3 of Appendix 2).

SMS Change management

A formal process to manage changes within an organization in a systematic manner, so that changes which may impact identified hazards and risk mitigation strategies are accounted for, before the implementation of such changes.

SMS Defenses

Specific mitigating actions, preventive controls or recovery measures put in place to prevent the realization of a hazard or its escalation into an undesirable consequence.

SMS-Trigger

An established level or criteria value for a particular safety performance indicator that serves to initiate an action required, (e.g., an evaluation, adjustment or remedial action).

SNOWTAM

A special series NOTAM given in a standard format providing a surface condition report notifying the presence or cessation of hazardous conditions due to snow, ice, slush, frost, standing water or water associated with snow, slush, ice or frost on the movement area.

Solo flight

That flight time during which a person undergoing training toward a pilot certificate is the sole occupant of the aircraft or that flight time during which the person performs the duties of a PIC of a gas balloon or an airship requiring more than one pilot flight crew member.

Solo flight time

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

Solo flight time — remotely piloted aircraft system

Flight time during which a student remote pilot is controlling the remotely piloted aircraft system, acting solo.

Sound incidence angle

In degrees, an angle between the principal axis of the microphone and a line from the sound source to the center of the diaphragm of the microphone.

Note— When the sound incidence angle is 0°, the sound is said to be received at the microphone a "normal (perpendicular) incidence"; when the sound incidence angle is 90°, the sound is said to be received at "grazing incidence".

The principal axis of a measurement microphone is through the center of the diaphragm and perpendicular to it.

South Polar Area

The entire area south of 60° S latitude.

Space weather center (SWXC)

A center designated to monitor and provide advisory information on space weather phenomena expected to

affect high-frequency radio communications, communications via satellite, GNSS-based navigation and surveillance systems and/or pose a radiation risk to aircraft occupants.

Note— A space weather center is designated as global and/or regional.

Spare parts

Articles, including engines and propellers, of a repair or replacement nature for incorporation in an aircraft.

Special aviation event

An aerial display or demonstration before an assembly of persons by one or more aircraft.

Special Unscheduled

See explanation in GACAR § 121.5(b).

Special VFR flight

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

Specialty Curriculum

A set of courses designed to satisfy a requirement of the GACAR and approved by the President 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.

Specific air range

The distance an airplane travels in the cruise flight phase per unit of fuel consumed.

Specific approval

A specific approval is an approval which is documented in the Operations Specifications for commercial air transport operations or in the list of specific approvals for non-commercial operations.

Note— The terms authorization, specific approval, approval and acceptance are further described in th ICAO Annex 6, Part I, Attachment D.

Split duty

A flight duty period that has a scheduled break in duty that is less than a required rest period.

Spot beam

Satellite antenna directivity whose main lobe encompasses significantly less than the earth's surface that is within line-of-sight view of the satellite. May be designed so as to improve system resource efficiency with respect to geographical distribution of user earth stations.

Squitter protocol data unit (SPDU)

Data packet which is broadcast every 32 seconds by an HFDL ground station on each of its operating frequencies, and which contains link management information.

Stability

The closeness with which repeated measurements upon a given invariant sample can be maintained over a given period of time.

Standard atmosphere

An atmosphere defined asfollows:

a) the air is a perfect drygas;

b) the physical constants are:

—Sea level mean molarmass:

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

—Sea level atmospheric pressure:

$P_0 = 1013.250$ hPa

—Sea level temperature:

$t_0 = 15°C$

$T_0 = 288.15$ K

—Sea level atmospheric density:

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

—Temperature of the ice point:

Ti = 273.15 K

—Universal gas constant:

$R^* = 8.314\ 32$ JK^{-1} mol^{-1}

c) the temperature gradients are:

Geopotentialaltitude(km)		Temperature gradient (Kelvin perstandard geopotential kilometer)
From	To	
–5.0	11.0	–6.5
11.0	20.0	0.0
20.0	32.0	+1.0
32.0	47.0	+2.8
47.0	51.0	0.0
51.0	71.0	–2.8
71.0	80.0	–2.0

Note 1— The standard geopotentia meter has the value 9.806 65 $m^2 s^{-2}$.

Note 2— See ICAO Doc 7488 fo the relationship between the variables and for tables giving the corresponding values of temperature, pressure, density and geopotential.

Note 3— Doc 7488 also gives th specific weight, dynamic viscosity, kinematic viscosity and speed of sound at various altitudes.

Standard isobaric surface

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

Standard length message (SLM)

An exchange of digital data using selectively addressed Comm-A interrogations and/or Comm-B replies (see “Comm-A” and “Comm-B”).

Standard message element

Part of a message defined in the PANS-ATM (Doc 4444) in terms of display format, intended use and attributes.

Standard positioning service (SPS)

The specified level of positioning, velocity and timing accuracy that is available to any global positioning system (GPS) user on a continuous, worldwide basis.

Standard UAT receiver

A general purpose UAT receiver satisfying the minimum rejection requirements of interference from adjacent frequency distance measuring equipment (DME).

Standardized health documents

Documents standardized by the World Health Organization (WHO) under the International Health Regulations (IHR) (2005).

State of Design

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

State of Design of Modification

The State having jurisdiction over the individual or organization responsible for the design of the modification or repair of an aircraft, engine or propeller.

State of Destination

The State in the territory of which the consignment is finally to be unloaded from an aircraft.

State of Manufacture

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

State of Occurrence

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

State of Origin

The State in the territory of which the consignment is first to be loaded on an aircraft.

State of Registry

The State on whose register the aircraft is entered.

Note— In the case of the registration of aircraft of an international operating agency on other than a national basis, the States constituting the agency are jointly and severally bound to assume the obligations which, under the Chicago Convention, attach to a State of Registry. See, in this regard, the Council Resolution of 14 December 1967 on Nationality and Registration of Aircraft Operated by International Operating Agencies which can be found in Policy and Guidance Material on the Economic Regulation of International Air Transport (Doc 9587).

State of the Aerodrome

The State in whose territory the aerodrome is located.

State of the Operator

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

State of the principal location of a general aviation operator

The State in which the operator of a general aviation aircraft has its principal place of business or, if there is no such place of business, its permanent residence.

Note— Guidance concerning the options for the principal location of a general aviation operator i contained in the Manual on the Implementation of Article 83 bis of the Convention on International Civil Aviation (Doc 10059).

State safety programme (SSP)

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

State volcano observatory

A volcano observatory, designated by regional air navigation agreement, to monitor active or potentially active volcanoes within a State and to provide information on volcanic activity to its associated area control center/flight information center, meteorological watch office and volcanic ash advisory center.

Static load-bearing surface

A surface capable of supporting the mass of a helicopter situated upon it.

Stationdeclination

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

Steradian (sr)

The solid angle which, having its vertex in the center 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

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.

Stores (Supplies)

a) Stores (supplies) for consumption – Goods, whether or not sold, intended for consumption by the passengers and the crew on board aircraft, and goods necessary for the operation and maintenance of aircraft, including fuel and lubricants.

b) Stores (Supplies) to be taken away – Goods for sale to the passengers and the crew of aircraft with a view to being landed.

Strayed aircraft

An aircraft which has deviated significantly from its intended track or which reports that it is lost.

Student pilot seeking a sport pilot certificate

A person who has received an endorsement—

a) To exercise student pilot privileges from a certificated flight instructor with a sport pilot rating; or

b) That includes the limitations specified in GACAR § 61.107(d) issued by a certificated flight instructor with other than a sport pilot rating.

Subnetwork

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

Subnetwork connection

A long-term association between an aircraft DTE and a ground DTE using successive virtual calls to maintain context across link handoff.

Subnetwork dependent convergence function (SNDCF)

A function that matches the characteristics and services of a particular subnetwork to those characteristics and services required by the internetwork facility.

Subnetwork entity

In this document, the phrase “ground DCE” will be used for the subnetwork entity in a ground station communicating with an aircraft; the phrase “ground DTE” will be used for the subnetwork entity in a ground router communicating with an aircraft station; and, the phrase “aircraft DTE” will be used for the subnetwork entity in an aircraft communicating with the station. A subnetwork entity is a packet layer entity as defined in ISO 8208.

Subnetwork entry time

The time from when the mobile station starts the scanning for BS transmission, until the network link establishes the connection, and the first network user "protocol data unit" can be sent.

Subnetwork layer

The layer that establishes, manages and terminates connections across a subnetwork.

Subnetwork management entity (SNME)

An entity resident within a GDLP that performs subnetwork management and communicates with peer entities in intermediate or end-systems.

Subnetwork service data unit (SNSDU)

An amount of subnetwork user data, the identity of which is preserved from one end of a subnetwork connection to the other.

Subscriber station (SS)

A generalized equipment set providing connectivity between subscriber equipment and a base station (BS).

Successful message reception (SMR)

The function within the UAT receiver for declaring a received message as valid for passing to an application that uses received UAT messages. See Section 4 of Part I of the Manual on the Universal Access Transceiver (UAT) ICAO Doc 9861 for a detailed description of the procedure to be used by the UAT receiver for declaring successful message reception.

Suitable accommodation

A temperature-controlled facility with sound mitigation and the ability to control light that provides a flight crew member with the ability to sleep either in a bed, bunk or in a chair that allows for flat or near flat sleeping position. Suitable accommodation only applies to ground facilities and does not apply to aircraft onboard rest facilities.

Suitable RNAV system

An area navigation (RNAV) system that meets the required performance established for a type of operation, such as IFR. It is suitable for operation over the route to be flown in terms of any performance criteria (including accuracy) established by the air navigation service provider for certain routes, such as oceanic, air traffic service (ATS) routes, and instrument approach procedures (IAP). An RNAV system's suitability is dependent upon the availability of ground and/or satellite navigation aids needed to meet any route

performance criteria that may be prescribed in route specifications to navigate the aircraft along the route to be flown.

Surface-level heliport

A heliport located on the ground or on a structure on the surface of the water.

Surveillance

The State activities through which the State proactively verifies through inspections and audits that aviation license, certificate, authorization or approval holders continue to meet the established requirements and function at the level of competency and safety required by the State.

Surveillance radar

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

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.

Synchronous operation

Operation in which the time interval between code units is a constant.

Synthetic vision system (SVS)

A system to display data-derived synthetic images of the external scene from the perspective of the flight deck.

System

An organized, purposeful structure that consists of interrelated and interdependent elements and components, and related policies, procedures and practices created to carry out a specific activity or solve a problem.

System efficiency

The ratio of valid replies processed by the interrogator to the total of its own interrogations.

Take-off and initial climb phase

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

Take-off decision point (TDP)

The point used in determining take-off performance from which, an engine failure occurring at this point, either a rejected take-off may be made or a take-off safely continued.

Note— TDP applies only to helicopters operating in performance Class 1.

Takeoff decision speed

The maximum speed in the takeoff at which the pilot may initiate action (for example, apply brakes, reduce thrust, deploy speed brakes) to abandon the takeoff and stop the airplane within the accelerate stop distance. It 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.

Take-off distance available (TODA)

The length of the take-off run available plus the length of the clearway, if provided.

Takeoff distance required (TODRH)

The horizontal distance required from the start of the takeoff to the point at which V_{TOSS}, a selected height, and a positive climb gradient are achieved, following failure of the critical engine being recognized at the takeoff decision point (TDP), the remaining engines operating within approved operating limits.

Note— the selected height stated above is to be determined with reference to either:

a) The takeoff surface,or

b) A level defined by the highest obstacle in the takeoff distance required.

Takeoff flight path

The vertical and horizontal path of a helicopter, with the critical engine inoperative, from a specified point in the takeoff to 1 000 ft (300 m) above the surface.

Take-off phase

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

Takeoff power

a) With respect to reciprocating engines, the brake horsepower that is developed under conditions at

standard sea level 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.

b) With respect to turbine engines, the brake horsepower that is developed under static conditions at a specified altitude and atmospheric temperature 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 run available (TORA)

The length of runway declared available and suitable for the ground run of an airplane taking off.

Take-off runway

A runway intended for take-off only.

Takeoff safety speed (V2)

A referenced airspeed obtained after lift-off at which the required one-engine-inoperative climb performance can be achieved.

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.

Tandem wing configuration

A configuration of two wings of similar span, mounted in tandem.

Target level of safety (TLS)

A generic term representing the level of risk which is considered acceptable in particular circumstances.

Task familiar

Describes a flight crew member who is familiar with and can satisfactorily accomplish the duties of a particular crew duty position, though not qualified for that duty position. For example, an SIC candidate who performs the duties of the PIC during simulator training.

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).

Taxiing

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

Taxiway

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

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

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

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

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.

tca

Nominally, the time of closest approach. For encounters in the standard encounter model (ICAO Annex 10 Vol, IV 4.4.2.6), a reference time for the construction of the encounter at which various parameters, including the vertical and horizontal separation (vmd and hmd), are specified.

Note— Encounters in the standard encounter model (ICAO Annex 10 Vol, IV 4.4.2.6) are constructed by building the trajectories of the two aircraft outwards starting at tca. When the process is complete, tca may not be the precise time of closest approach and differences of a few seconds are acceptable.

Technical inspection

Visual and/or instrumental verification of compliance with technical specifications related to aerodrome infrastructure and operations.

Technical Instructions

The Technical Instructions for the Safe Transport of Dangerous Goods by Air (Doc 9284), approved and issued periodically in accordance with the procedure established by the ICAO Council.

Telecommunication (RR S1.3)

Any transmission, emission, or reception of signs, signals, writing, images and sounds or intelligence of any nature by wire, radio, optical or other electromagnetic systems.

Teletypewriter tape

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

Temporary admission

The customs procedure under which certain goods can be brought into a customs territory conditionally relieved totally or partially from payment of import duties and taxes; such goods must be imported for a specific purpose and must be intended for re-exportation within a specified period and without having undergone any change except normal depreciation due to the use made of them.

Terminal arrival altitude (TAA)

The lowest altitude that will provide a minimum clearance of 300 m (1 000 ft) above all objects located in an arc of a circle defined by a 46 km (25 NM) radius centered on the initial approach fix (IAF), or where there is no IAF on the intermediate approach fix (IF), delimited by straight lines joining the extremity of the arc to the IF. The combined TAAs associated with an approach procedure shall account for an area of 360 degrees around the IF.

Terminal control area

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

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.

Tesla (T)

The magnetic flux density given by a magnetic flux of 1 weber per square meter.

Theater

A geographical area in which the distance between the flight crew member's flight duty period departure point and arrival point differ by no more than 60 degrees longitude.

Threat

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

Note— See Chapter 1 of the ICAO Annex 19 — Safety Management for a definition of operational personne

Threat management

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

Note— See Chapter 6 of Part II, Section I of the Procedures for Air Navigation Services — Trainir (PANS-TRG, Doc 9868) and Circular 314 — Threat and Error Management (TEM) in Air Traffic Contro for a description of undesired states.

Threshold

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

Threshold time

The range, expressed in time, established by the State of the Operator, to an en-route alternate aerodrome, whereby any time beyond requires a specific approval for EDTO from the State of the Operator.

Through-flight

A particular operation of aircraft, identified by the operator by the use throughout of the same symbol, from point of origin via any intermediate points to point of destination.

Tilt-rotor

A powered-lift capable of vertical take-off, vertical landing, and sustained low-speed flight, which depends principally on engine-driven rotors mounted on tiltable nacelles for the lift during these flight regimes and on nonrotating aerofoil(s) for lift during high-speed flight.

Time Difference of Arrival (TDOA)

The difference in relative time that a transponder signal from the same aircraft (or ground vehicle) is received at different receivers.

Time division duplex (TDD)

A duplex scheme where uplink and downlink transmissions occur at different times but may share the same frequency.

Time division multiple access (TDMA)

A multiple access scheme based on time-shared use of an RF channel employing:

a) discrete contiguous time slots as the fundamental shared resource;and

b) a set of operating protocols that allows users to interact with a master control station to mediate access to the channel.

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-average band sound pressure level

In decibels, ten times the logarithm to the base ten, of the ratio of the time mean-square of the instantaneous sound pressure during a stated time interval and in a specified one-third octave band, to the square of the reference sound pressure of 20 µPa.

Timeout

The cancellation of a transaction after one of the participating entities has failed to provide a required response within a pre-defined period of time.

Time-to-alert

The maximum allowable time elapsed from the onset of the navigation system being out of tolerance until the equipment enunciates the alert.

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.

Total vertical error (TVE)

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

Total voice transfer delay

The elapsed time commencing at the instant that speech is presented to the AES or GES and concluding at the instant that the speech enters the interconnecting network of the counterpart GES or AES. This delay includes vocoder processing time, physical layer delay, RF propagation delay and any other delays within an AMS(R)S subnetwork.

Touchdown

The point where the nominal glide path intercepts the runway.

Note— "Touchdown" as defined above is only a datum and is not necessarily the actual point at which th aircraft will touch the runway.

Touchdown and lift-off area (TLOF)

An area on which a helicopter may touch down or lift off.

Touchdown positioning circle (TDPC)

A touchdown positioning marking (TDPM) in the form of a circle used for omnidirectional positioning in a TLOF.

Touchdown positioning marking (TDPM)

A marking or set of markings providing visual cues for the positioning of helicopter.

Touchdown zone

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

Towhitch

The tow release mechanism and its mounting fixture that is normally attached to aircraft used in towing operations. The tow hitch serves as a point of attachment for all trailing equipment, and has a remote control release from the flightdeck.

Traceability

Ability to trace the history, application or location of that which is under consideration (ISO 9000, Quality Management Systems — Fundamentals and Vocabulary).

Note— When considering product, traceability can relate to:

—the origin of materials and parts;

—the processing history; and

—the distribution and location of the product after delivery.

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 advisory (TA)

An indication given to the flight crew that a certain intruder is a potential threat.

Traffic avoidance advice

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

Traffic information

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

Traffic information service – broadcast (TIS-B) IN

A surveillance function that receives and processes surveillance data from TIS-B OUT data sources.

Traffic information service – broadcast (TIS-B) OUT

A function on the ground that periodically broadcasts the surveillance

information made available by ground sensors in a format suitable for TIS-B IN capable receivers.

Note— This technique can be achieved through different data links. The requirements for Mode S extende squitters are specified in the ICAO Annex 10, Volume IV, Chapter 5. The requirements for VHF digital link

(VDL) Mode 4 and universal access transceiver (UAT) are specified in the ICAO Annex 10, Volume III, Part I.

Traffic pattern

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

Trainee air traffic controller (ATCO)

The holders of ATCO certificate who is undergoing on-the-job training (OJT):

a) Towards the grant of a rating and unit endorsement(if any)in which they have not previously held a valid rating, but in which they have successfully completed an approved course of initial training under GACAR Part 144;or

b) At a unit where they do not yet hold a valid endorsement appropriate to the ATC service to be provided but in which they hold, or have held within the previous five years, a valid rating in the same rating discipline at another unit.

Training center

An organization certificated under GACAR Part 142 that provides training, testing, and checking of pilots, flight instructors, ground instructors, and flight engineers subject to the requirements of the GACAR.

Training program

The collection of courses, courseware, facilities, equipment, and personnel necessary to accomplish a specific training objective. It may include a core curriculum and a specialty curriculum.

Training time

For purposes of recording flight crew member experience, means training received—

a)In flight from an authorized instructor,

b)On the ground from an authorized instructor, or

c)In a flight simulation training device (FSTD) from an authorized instructor.

Transfer cargo and mail

Cargo and mail departing on an aircraft other than that on which it arrived.

Transfer of control point

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

Transferring unit

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

Transit delay

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

Transit time-Communication

The elapsed time between the instant of filing a message with an AFTN station for transmission on the network, and the instant that it is made available to the addressee.

Transition altitude

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

Transition training

The training required for crew members or aircraft dispatchers who have qualified and served in the same capacity on or with respect to another aircraft for the same certificate holder. For operations under GACAR Part 121, the other aircraft must be in the same group, as specified in GACAR § 121.5(a).

Transitioning aircraft

An aircraft having an average vertical rate with a magnitude exceeding 400 feet per minute (ft/min), measured over some period of interest.

Transmission rate

The average number of pulse pairs transmitted from the transponder per second.

Transponder occupancy

A state of unavailability of the transponder from the time it detects an incoming signal that appears to cause some action or from the time of a self-initiated transmission, to the time that it is capable of replying to another interrogation.

Note— Signals from various systems that contribute to transponder occupancy are described in the Aeronautical Surveillance Manual (Doc 9924), Appendix M.

Transport category aircraft

An aircraft type certificated under GACAR Part 21 to the airworthiness standards as prescribed in GACAR Part 25 (Transport Category Airplanes) or GACAR Part 29 (Transport Category Rotorcraft).

Travel document

A passport or other official document of identity issued by a State or organization, which may be used by the rightful holder for international travel.

Tributary station

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

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 center (TCAC)

A meteorological center designated by regional air navigation agreement to provide advisory information to meteorological watch offices, world area forecast centers and international OPMET databanks regarding the position, forecast direction and speed of movement, central pressure and maximum surface wind of tropical cyclones.

Troubleshoot

To analyze and identify the nature and source of malfunctions in an airframe, powerplant, or aircraft component.

True airspeed (TAS)

The speed of the airplane relative to undisturbed air.

Turn extent

A heading difference defined as an aircraft’s ground heading at the end of a turn minus its ground heading at the beginning of the turn.

Two-frequency glide path system

An ILS glide path in which coverage is achieved by the use of two independent radiation field patterns

spaced on separate carrier frequencies within the particular glide path channel.

Two-frequency localizer system

A localizer system in which coverage is achieved by the use of two independent radiation field patterns spaced on separate carrier frequencies within the particular localizer VHF channel.

Type Certificate

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

Note 1 — In some Contracting States a document equivalent to a Type Certificate may be issued for an engine or propeller type.

Note 2 — In some Contracting States the Type Certificate may also certify that the design meets the appropriate aircraft engine emissions requirements of that State.

Type design

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

UAT ADS-B message

A message broadcasted once per second by each aircraft to convey state vector and other information. UAT ADS-B messages can be in one of two forms depending on the amount of information to be transmitted in a given second: the Basic UAT ADS-B Message or the Long UAT ADS-B Message (Refer to ICAO Annex 10, Vol III, Ch 12, UAT 12.4.4.1 for definition of each). UAT ground stations can support traffic information service-broadcast (TIS-B) through transmission of individual ADS- B messages in the ADS-B segment of the UAT frame.

UAT ground uplink message

A message broadcasted by ground stations, within the ground segment of the UAT frame, to convey flight information such as text and graphical weather data, advisories, and other aeronautical information, to aircraft that are in the service volume of the ground station (Refer to ICAO Annex 10, Vol III, Ch 12, UAT 12.4.4.2 for further details).

Ultimate load

The limit load multiplied by the appropriate factor of safety.

Ultralight Vehicle

See description in GACAR § 103.1.

Ultralight vehicle accident

An occurrence associated with the operation of an ultralight vehicle which takes place between the time any person boards the ultralight vehicle 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:

(1) Being in the ultralight vehicle,or

(2) Direct contact with any part of the ultralight vehicle, including parts which have become detached from the ultralight vehicle, except when the injuries are from natural causes, self-inflicted or inflicted by other persons; or

b) The ultralight vehicle is missing or is completely inaccessible.

UN number

The four-digit number assigned by the United Nations Committee of Experts on the Transport of Dangerous Goods and on the Globally Harmonized System of Classification and Labelling of Chemicals to identify an article or substance or a particular group of articles or substances.

Unaccompanied baggage

Baggage that is transported as cargo and may or may not be carried on the same aircraft with the person to whom it belongs.

Unaccompanied minor

A minor travelling alone or travelling only in the company of another minor.

Note— It is to be noted that this definition might need to be applied in light of any obligation resulting from the application of national regulations on border checks.

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.

Unclaimed baggage

Baggage that arrives at an airport and is not picked up or claimed by a passenger.

Unforeseen operational circumstance

An unplanned event of insufficient duration to allow for adjustments to schedules, including unforecast weather, equipment malfunction, or air traffic delay that is not reasonably expected.

Unidentified aircraft

An aircraft which has been observed or reported to be operating in a given area but whose identity has not been established.

Unidentified baggage

Baggage at an airport, with or without a baggage tag, which is not picked up by or identified with a passenger.

Unit load device

Any type of freight container, aircraft container, aircraft pallet with a net, or aircraft pallet with a net over an igloo. *Note— An overpack is not included in this definition.*

Universal access transceiver (UAT)

A broadcast data link operating on 978 MHz, with a modulation rate of 1.041667 Mbps.

Unlading

The removal of cargo, mail, baggage or stores from an aircraft after a landing.

Unmanned free balloon

A non-power-driven, unmanned, lighter-than-air aircraft in freeflight.

Note— Unmanned free balloons are classified as heavy, medium or light in accordance with specifications contained in ICAO Annex 2, Appendix 5.

Note— Also referred to as "Moored balloon"

Unpredictability

The implementation of security measures in order to increase their deterrent effect and their efficiency, by applying them at irregular frequencies, different locations and/or with varying means, in accordance with a defined framework.

Unscheduled Operation

In the context of flight operations, an operation for compensation or hire, conducted by the holder of an air operator certificate that is one of the following:

a)An operation in which the departure time, departure location, and arrival location are specifically negotiated with the customer or the customer's representative;

b)An operation in which the departure location and the arrival location are the same; or

c)An all-cargo operation.

Unserviceable area

A part of the movement area that is unfit and unavailable for use by aircraft.

Upgrade training

The training required for flight crew members who have qualified and served as second in command or flight engineer on a particular aircraft type, before they serve as pilot in command or second in command, respectively, on that aircraft.

Uplink

A term referring to the transmission of data from the ground to an aircraft. Mode S ground-to-air signals are transmitted on the 1 030 MHz interrogation frequency channel.

Uplink ELM (UELM)

A term referring to extended length uplink communication by means of 112-bit Mode S Comm-C interrogations, each containing the 80-bit Comm-C message field (MC).

Upper-air chart

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

Usability factor

The percentage of time during which the use of a runway or system of runways is not restricted because of the crosswind component.

Note— Crosswind component means the surface wind component at right angles to the runway center line

User group

A group of ground and/or aircraft stations which share voice and/or data connectivity. For voice

communications, all members of a user group can access all communications. For data, communications include point-to-point connectivity for air-to-ground messages, and point-to-point and broadcast connectivity for ground-to-air messages.

V_{TOSS}

The minimum speed at which climb shall be achieved with the critical engine inoperative, the remaining engines operating within approved operating limits.

Note— The speed referred to above may be measured by instrument indications or achieved by a procedur specified in the flight manual.

Validation

Confirmation, through the provision of objective evidence, that the requirements for a specific intended use or application have been fulfilled (ISO 9000, Quality Management Systems — Fundamentals an Vocabulary).

VDL management entity (VME)

A VDL-specific entity that provides the quality of service requested by the ATN-defined SN_SME. A VME uses the LMEs (that it creates and destroys) to enquire the quality of service available from peer systems.

VDL Mode 4 burst

A VHF digital link (VDL) Mode 4 burst is composed of a sequence of source address, burst ID, information, slot reservation and frame check sequence (FCS) fields, bracketed by opening and closing flag sequences.

Note— The start of a burst may occur only at quantized time intervals and this constraint allows th propagation delay between the transmission and reception to be derived.

VDL Mode 4 DLS system

A VDL system that implements the VDL Mode 4 DLS and subnetwork protocols to carry ATN packets or other packets.

VDL Mode 4 specific services (VSS) sublayer

The sublayer that resides above the MAC sublayer and provides VDL Mode 4 specific access protocols including reserved, random and fixed protocols.

VDL station

An aircraft-based or ground-based physical entity, capable of VDL Mode 2, 3 or 4.

Note— In the context of this chapter, a VDL station is also referred to as a "station".

VDL-System

A VDL-capable entity. A system comprises one or more stations and the associated VDL management entity. A system may either be an aircraft system or a ground system.

Vectoring

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

Verification

Confirmation, through the provision of objective evidence, that specified requirements have been fulfilled (ISO 9000, Quality Management Systems — Fundamentals and Vocabulary).

Note— The term "verified" is used to designate the corresponding status.

Vertical miss distance (vmd)

Notionally, the vertical separation at closest approach. For encounters in the standard encounter model (ICAO Annex 10, Vol IV, Ch 4,4.4.2.6), by construction the vertical separation at the time tca.

Vertical speed limit (VSL) RA

A resolution advisory advising the pilot to avoid a given range of altitude rates. A VSL RA can be either corrective or preventive.

VFR

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

VFR flight

A flight conducted in accordance with the visual flight rules.

VHF digital link(VDL)

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

Virtual origin

The point at which the straight line through the 30 per cent and 5 per cent amplitude points on the pulse

leading edge intersects the 0 per cent amplitude axis (see the ICAO Annex 10, Vol I, Figure 3-2).

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.

Note 1— The two distances have different values in air of a given extinction coefficient, and the latter b varies with the background illumination. The former a) is represented by the meteorological optical range (MOR).

Note. 2— The definition applies to the observations of visibility in local routine and special reports, t the observations of prevailing and minimum visibility reported in METAR and SPECI and to the observations of ground visibility.

Visitor

Any person who disembarks and enters the territory of a Contracting State other than that in which that person normally resides; remains there lawfully as prescribed by that Contracting State for legitimate non-immigrant purposes.

Visual approach procedure

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

Visual line-of-sight (VLOS) operation

An operation in which the remote pilot or RPA observer maintains direct unaided visual contact with the remotely piloted aircraft.

Visual meteorological conditions (VMC)

Meteorological conditions expressed in terms of visibility, distance from cloud, and ceiling*, equal to or better than specified minima.

Note— The specified minima are contained in Chapter 4 of the ICAO Annex 2.

VMC

The symbol used to designate visual meteorological conditions.

Vocoder

A low bit rate voice encoder/decoder.

Voice unit

A device that provides a simplex audio and signalling interface between the user and VDL.

Voice-automatic terminal information service (Voice-ATIS)

The provision of ATIS by means of continuous and repetitive voice broadcasts.

Volcanic ash advisory center (VAAC)

A meteorological center designated by regional air navigation agreement to provide advisory information to meteorological watch offices, area control centers, flight information centers, world area forecast centers and international OPMET databanks regarding the lateral and vertical extent and forecast movement of volcanic ash in the atmosphere.

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.

V_{s1}

A stalling speed or minimum steady flight speed.

Note 1— See the ICAO Annex 6 Part I, Example 1, 2.5.

Note 2— See Chapter 1 of the ICAO Annex 6 Part I and the ICAO Annexes 8 and 14, Volume I, for othe definitions.

Note 3 — The terms "accelerate-stop distance", "take-off distance", "V", "take-off run", "net take-of flight path", "one engine inoperative en-route net flight path", and "two engines inoperative en-route ne flight path", as relating to the airplane, have their meanings defined in the airworthiness requirements

under which the airplane was certificated. If any of these definitions are found inadequate, then a definition specified by the President should be used.

V_{so}

A stalling speed or minimum steady flight speed in the landing configuration.

Note— See the ICAO Annex 6 Part I, Example 1, 2.4.

VSS user

A user of the VDL Mode 4 specific services. The VSS user could be higher layers in the VDL Mode 4 SARPs or an external application using VDL Mode 4.

Watt (W)

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

Waypoint

A specified geographical location used to define an area navigation route or the flight path of an aircraft employing area navigation. Waypoints are identified as either: a) Fly-by waypoint. A waypoint which requires turn anticipation to allow tangential interception of the next segment of a route or procedure; or b) Flyover waypoint. A waypoint at which a turn is initiated in order to join the next segment of a route or procedure.

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.

Weight-shift-control aircraft

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

Wet lease

Any leasing arrangement when the aircraft is operated under the operating certificate of the lessor and the lessor has operational control.

Wet runway

The runway surface is covered by any visible dampness or water up to and including 3 mm deep within the

intended area of use.

Wide area multilateration (WAM) system

A multilateration system deployed to support en-route surveillance, terminal area surveillance and other applications such as height monitoring and precision runway monitoring (PRM).

Wildlife strike hazard

A potential for a damaging aircraft collision with wildlife on or near an aerodrome.

Winching area

An area provided for the transfer by helicopter of personnel or stores to or from a ship.

Window of circadian low

A period of maximum sleepiness that occurs between 0200 and 0559 during a physiological night.

Windscreen insertion loss

In decibels, at a stated nominal one-third octave midband frequency, and for a stated sound incidence angle on the inserted microphone, the indicated sound pressure level without the windscreen installed around the microphone minus the sound pressure level with the windscreen installed.

Winglet or tip fin

An out-of-plane surface extending from a lifting surface. A winglet or tip fin may or may not have control surfaces.

Work area

A part of an aerodrome in which maintenance or construction works are in progress.

Working day

A day when official business is conducted by the government of the Kingdom of Saudi Arabia.

World area forecast center (WAFC)

A meteorological center designated to prepare and issue significant weather forecasts and upper-air forecasts in digital form on a global basis direct to States using the aeronautical fixed service Internet-based services.

World area forecast system (WAFS)

A worldwide system by which world area forecast centers provide aeronautical meteorological en-route forecasts in uniform standardized formats.

XDCE

A general term referring to both the ADCE and the GDCE.

XDLP

A general term referring to both the ADLP and the GDLP.

Z marker beacon

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

Zero drift

Time-related deviation of instrument output from zero set point when it is operating on gas free of the component to be measured.

Zero gas

A gas to be used in establishing the zero, or no-response, adjustment of an instrument.

SUBPART B – ABBREVIATIONS

§1.11 Abbreviations

Abbreviation/Symbol	Expansion
AC	Alternating current
ACAS	Airborne collision avoidance system
ACC	Area control center
ACN	Aircraft Classification Number
ACR	Aircraft Classification Rating
AD	Airworthiness directive
ADIZ	Air defense identification zone
ADREP	Accident/incident data reporting
ADRS	Aircraft data recording system
ADS-B	Automatic dependent surveillance – broadcast
ADS-C	Automatic dependent surveillance — contract
AEO	All engines operative
AFCS	Automatic flight control system
AFIS	Aerodrome flight information service
AFM	Aircraft flight manual
AGA	Aerodromes, air routes and ground aids

Abbreviation/Symbol	Expansion
AGL	Above ground level
AHM	The IATA Airport Handling Manual
AIB	The Aviation Investigation Bureau of the Kingdom of Saudi Arabia
AIG	Accident investigation and prevention
AIP	Aeronautical information publication
AIR	Airborne image recorder
AIRAC	Aeronautical information regulation and control
AIREP	Air report
AIRS	Airborne image recording system
AIS	Aeronautical information services
AIXM	Aeronautical information exchange model
ALS	Approach light system
AME	Aviation medical examiner
AMOC	Alternate means of compliance
ANS	Air navigation service
ANSC	Air navigation service certificate
AOC	Air operator certificate
APAPI	Abbreviated precision approach path indicator

Abbreviation/Symbol	Expansion
APCH	Approach
APP	Approach control unit
aprx	Approximately
APU	Auxiliary power unit
APV	Approach procedure with vertical guidance
AR	Authorization required
ARINC	Aeronautical Radio Incorporated
ARIWS	Autonomous runway incursion warning system
ASDA	Accelerate-stop distance available
ASE	Altimetry system error
A-SMGCS	Advanced surface movements guidance and control system
ASR	Aerodrome surveillance radar
ATC	Air traffic control
ATCI	Air traffic controller instructor
ATCO	Air traffic controller
ATD	Aviation training device
ATFM	Air traffic flow management
ATIS	Automatic terminal information service

Abbreviation/Symbol	Expansion
ATM	Air traffic management
ATN	Aeronautical telecommunication network
ATP	Airline transport pilot
ATS	Air traffic services
ATSPM	Air traffic service procedures manual
ATSU	Air traffic services unit
AT-VASIS	Abbreviated T visual approach slope indicator system
AWOC	Aerial work operator certificate
BOM	Basic operating mass
C	Degree Celsius
C2	Command and control link (until 25 November 2026)
C2 Link	Command and control link (as of 26 November 2026)
CAMP	Continuous airworthiness maintenance program
CAN	Aircraft classification number
CARS	Cockpit audio recording system
CAS	Calibrated airspeed
CASS	Continuing analysis and surveillance system

Abbreviation/Symbol	Expansion
CAT	Category
CAT I	Category I
CAT II	Category II
CAT III	Category III
CBR	California bearing ratio
cd	Candela
CDL	Configuration deviation list
CFIT	Controlled flight into terrain
CFR	United States Code of Federal Regulations
CG	Center of gravity
CIE	Commission Internationale de l'Éclairage
cm	Centimeter
CMP	Configuration maintenance and procedures
CNS	Communications navigation and surveillance
COMAT	Operator material
CPDLC	Controller-pilot data link communications
CR	Certificate of registration
CRC	Cyclic redundancy check
CVR	Cockpit voice recorder

Abbreviation/Symbol	Expansion
CVS	Combined vision system
E	Modulus of elasticity
DA/H	Decision altitude/height
DC	Direct current
D-FIS	Data link-flight information services
DGPC	Dangerous Goods Preparer Certificate
DGTA	Dangerous Goods Transport Authorization
DH	Decision height
DLR	Data link recorder
DLRS	Data link recording system
DLRS	Data link recording system
DME	Distance measuring equipment
DSTRK	Desired track
DT	Damage tolerance
DTE	Damage tolerance evaluation
DTI	Damage tolerance inspection
EAS	Equivalent airspeed
EASA	European Aviation Safety Agency
EDTO	Extended diversion time operations

Abbreviation/Symbol	Expansion
EFB	Electronic flight bag
EFIS	Electronic flight instrument system
EGT	Exhaust gas temperature
EICAS	Engine indication and crew alerting system
ELT	Emergency locator transmitter
ELT(AD)	Automatic deployable ELT
ELT(AF)	Automatic fixed ELT
ELT(AP)	Automatic portable ELT
ELT(S)	Survival ELT
EPR	Engine pressure ratio
ETOPS	Extended operations
EUROCAE	European Organization for Civil Aviation Equipment
EVS	Enhanced vision system
EWIS	The electrical wiring interconnection system
F	Thrust for the given operating mode
FAA	United States Federal Aviation Administration
FADEC	Full authority digital engine control
FAF	Final approach fix

Abbreviation/Symbol	Expansion
FANS	Future air navigation system
FDAP	Flight data analysis programmes
FDAU	Flight data acquisition unit
FDP	Flight duty period
FDR	Flight data recorder
FFS	Full flight simulator
FIC	Flight information center
FIR	Flight information region
FIS	Flight information service
FL	Flight level
FM	Frequency modulation
FOD	Foreign object debris
FQA	Foreign qualifying authority
FRMS	Fatigue risk management system
FSDS	Flight safety documents system
FSTD	Flight simulation training device
ft	Foot
ft/min	Feet per minute
FTD	Flight training device

Abbreviation/Symbol	Expansion
g	Normal acceleration
GACA	The General Authority of Civil Aviation
GACAR	The General Authority of Civil Aviation Regulations
GBAS	Ground-based augmentation system
GCAS	Ground collision avoidance system
GLS	GBAS landing system
GNSS	Global navigation satellite system
GPS	Global positioning system
GPWS	Ground proximity warning system
GS	Glideslope
H	Fuel hydrogen content (mass percentage)
HIRL	High-intensity runway light system
HIV	Human immunodeficiency virus
hPa	Hectopascal
HUD	Head-up display
IAOPA	International Council of Aircraft Owner and Pilot Associations
IAP	Instrument approach procedure

Abbreviation/Symbol	Expansion
IAS	Indicated airspeed
IATA	The International Air Transport Association
IBAC	International Business Aviation Council
ICAO	International Civil Aviation Organization
IFP	Instrument flight procedure
IFR	Instrument flight rules
IFSD	In-flight shutdown
IGE	In-ground effect
IGOM	The IATA Ground Operations Manual
ILS	Instrument landing system
IM	ILS inner marker
IMC	Instrument meteorological conditions
inHg	Inch of mercury
INS	Inertial navigation system
ISA	International standard atmosphere
ISAGO	The IATA Safety Audit for Ground Operations
ISO	International Organization for Standardization
K	Degree Kelvin
kg	Kilogram

Abbreviation/Symbol	Expansion
kg/m^2	Kilogram per meter squared
km	Kilometer
km/h	Kilometer per hour
KSA	The Kingdom of Saudi Arabia
kt	Knot
kt/s	Knots per second
L	Litre
lb	Pound
lbf	Pound-force
LCFZ	Laser-beam critical flight zone
LDA	Landing distance available
LDA	localizer-type directional aid
LDRH	landing distance required (helicopter)
LED	Light emitting diode
LFFZ	Laser-beam free flight zone
LFR	Low-frequency radio range
LMM	Compass locator at middle marker
LOC	ILS localizer

Abbreviation/Symbol	Expansion
LOFT	Line oriented flight training
LOM	Compass locator at outer marker
LOPA	Layout of passenger accommodations
LRCS	Long-range communication system
LRNS	Long-range navigation system
LSA	Light-sport aircraft
LSFZ	Laser-beam sensitive flight zone
LTS	Lower than standard
LVO	Low visibility operations
LVP	Low visibility procedures
LVTO	Low visibility takeoff
m	Metre
M	Mach number
m/s	Metres per second
m/s^2	Metres per second squared
MAA	Maximum authorized IFR altitude
MALS	Medium intensity approach light system
MALSR	Medium intensity approach light system with runway alignment indicator lights

Abbreviation/Symbol	Expansion
MAT	Mass altitude temperature
max	Maximum
Mb	Millibar
MCA	Minimum crossing altitude
MDA/H	Minimum descent altitude/height
MDH	Minimum descent height
MEA	Minimum en route IFR altitude
MEL	Minimum equipment list
MET	Meteorological services
MHz	Megahertz
MLS	Microwave landing system
mm	Millimetre
MM	ILS middle marker
MMEL	Master minimum equipment list
MN	Meganewton
mnm	Minimum
MNPS	Minimum navigation performance specification
MOCA	Minimum obstruction clearance altitude
MOPS	Minimum operational performance specification

Abbreviation/Symbol	Expansion
MPa	Megapascal
MQTG	Master Qualification Test Guide
MRA	Minimum reception altitude
MSA	Minimum sector altitude
MSL	Mean sea level
N	Newton
N1	Low pressure compressor speed (two-stage compressor); fan speed (three-stage compressor)
N2	High pressure compressor speed (2-stage compressor); intermediate pressure compressor speed (3-stage compressor)
N3	High pressure compressor speed (three stage compressor)
NAV	Navigation
NAVAID	Navigation aid
NCR	Noncompliance record
NDB (ADF)	Nondirectional beacon (automatic direction finder)
NFZ	Normal flight zone
NM	Nautical mile
NOPAC	North Pacific area of operations

Abbreviation/Symbol	Expansion
NOPT	No procedure turn required
NOTAM	Notice to Airmen
NSPM	FAA National Simulator Program Manager
NU	Not usable
NVG	Night vision goggles
NVIS	Night vision imaging system
OC	Operator certificate
OCA/H	Obstacle clearance altitude/height
OCH	Obstacle clearance height
OEI	One engine inoperative
OFZ	Obstacle free zone
OGE	Out of ground effect
OJTI	On-the-job training instructor
OLS	Obstacle limitation surface
OM	ILS outer marker
OMGWS	Outer main gear wheel span
OpSpecs	Operations specifications
OTS	Other than standard
PANS	Procedures for Air Navigation Services

Abbreviation/Symbol	Expansion
PAPI	Precision approach path indicator
PAR	Precision approach radar
PBC	Performance-based communication
PBE	Protective breathing equipment
PBN	Performance-based navigation
PBS	Performance-based surveillance
PCN	Pavement classification number
PCR	Pavement classification rating
PIC	Pilot in command
PLA	Parachute landing area
PMA	Parts manufacturer approval
PME	Presidency of Meteorology and Environment
POB	Persons on board
PPE	Personal protective equipment
QPS	Qualification performance standards
RA	Resolution advisory
RAIL	Runway alignment indicator light system
RCC	Rescue coordination center
RCLM	Runway centerline marking

Abbreviation/Symbol	Expansion
RCLS	Runway centerline light system
RCP	Required communication performance
RDA	Repair design approval
REIL	Runway end identification lights
REMS	Rotorcraft emergency medical service
RESA	Runway end safety area
RFF	Rescue and firefighting
RFFS	Rescue and firefighting services
RFP	Repetitive flight plan
RHO	Rotorcraft hoist operations
RNAV	Area navigation
RNP	Required navigation performance
RNPSOR	Required navigation performance and special operational requirements
RPA	Remotely piloted aircraft
RPAS	Remotely piloted aircraft system
RPS	Remote pilot station
RSP	Required surveillance performance
RTCA	Radio Technical Commission for Aeronautics

Abbreviation/Symbol	Expansion
RTODR	Rejected takeoff distance required
RVR	Runway visual range
RVSM	Reduced vertical separation minima
SALS	Short approach light system
SAPMA	Saudi Arabian parts manufacturer approval
SAR	Search and rescue
SARPs	Standards and Recommended Practices
SATCOM	Satellite communications
SATSO	Saudi Arabian technical standard order
SBAS	Satellite-based augmentation system
SDCPS	Safety data collection and processing systems
SI	International System of Units
SIC	Second in command
SID	Standard instrument departure
SLOP	Strategic lateral offset procedure
SMGCS	Surface movements guidance and control system
SMM	Safety management manual
SMP	Safety management panel
SMS	Safety management system

Abbreviation/Symbol	Expansion
SOP	Standard operating procedure
SOQ	Statement of Qualification
SS&AT	The Safety Security and Air Transport Sector of the GACA
SSALS	Simplified short approach light system
SSALSR	Simplified short approach light system with runway alignment indicator lights
SSP	State safety programme
SSR	Secondary surveillance radar
SST	Supersonic transport
STAR	Standard terminal arrival
STC	Supplemental type certificate
STOL	Short take-off and landing
SVS	Synthetic vision system
TA	Traffic advisory
TAWS	Terrain awareness and warning system
TACAN	Ultra high-frequency tactical air navigational aid
TAS	True airspeed
TAWS	Terrain awareness warning system

Abbreviation/Symbol	Expansion
TCAS	Traffic alert and collision avoidance system
TCDS	Type certificate data sheet
TDZ	Touchdown zone
TDZL	Touchdown zone lights
TEM	Threat and error management
TIBA	Traffic information broadcast by aircraft
TLA	Thrust lever angle
TLS	Target level of safety
TODA	Take-off distance available
TODRH	Takeoff distance required (helicopter)
TORA	Take-off run available
TSO	Technical standard order
T-VASIS	T visual approach slope indicator system
TVE	Total vertical error
TVOR	A VHF terminal omnidirectional range station
UN	United Nations
UTC	Coordinated universal time
UTP	Unit training plan
V_1	Takeoff decision speed

Abbreviation/Symbol	Expansion
V_2	Takeoff safety speed
V_{2min}	Minimum takeoff safety speed
V_A	Design maneuvering speed
V_B	Design speed for maximum gust intensity
V_C	Design cruising speed
V_D	Design diving speed
V_{DF}/M_{DF}	Demonstrated flight diving speed
V_{EF}	The speed at which the critical engine is assumed to fail during takeoff
V_F	Design flap speed
V_{FC}/M_{FC}	Maximum speed for stability characteristics
V_{FE}	Maximum flap extended speed
VFR	Visual flight rules
V_{FTO}	Final takeoff speed
V_H	Maximum speed in level flight with maximum continuous power
VHF	Very high frequency
V_{LE}	Maximum landing gear extended speed
V_{LO}	Maximum landing gear operating speed

Abbreviation/Symbol	Expansion
V_{LOF}	Lift off speed
VLOS	Visual line-of-sight
VMC	Visual meteorological conditions
V_{MC}	Minimum control speed with the critical engine inoperative
V_{MO}/M_{MO}	Maximum operating limit speed
V_{MU}	Minimum unstick speed
V_{NE}	Never exceed speed
V_{NO}	Maximum structural cruising speed
VOR	Very high frequency omnidirectional radio range
VOR VHF	Omnidirectional radio range
VORTAC	Collocated VOR and TACAN stations
V_R	Rotation speed
V_{REF}	Reference landing speed
V_S	The stalling speed or the minimum steady flight speed at which the airplane is controllable
V_{S0}	The stalling speed or the minimum steady flight speed in the landing configuration
V_{S1}	The stalling speed or the minimum steady flight speed obtained in a specific configuration

Abbreviation/Symbol	Expansion
VSM	Vertical separation minima
V_{SR}	Reference stall speed
V_{SR0}	Reference stall speed in the landing configuration
V_{SR1}	Reference stall speed in a specific configuration
V_{SW}	Speed at which onset of natural or artificial stall warning occurs
V_{TOL}	Vertical take-off and landing
V_{TOSS}	Takeoff safety speed for Category A rotorcraft
V_X	Speed for best angle of climb
V_Y	Speed for best rate of climb
WHMP	Wildlife hazard management programme
WIP	Work in progress
W_{XR}	Weather
‘	Minute of arc
%	Percentage
<	Less than
=	Equals
>	Greater than
±	Plus or minus

Abbreviation/Symbol	Expansion
°	Degree
μ	Friction coefficient

SUBPART C – EDITORIAL CONVENTIONS

§ 1.21 Rules of Construction

(a)As used in the GACARs, unless the context requires otherwise—

(1)Words importing the singular include the plural.

(2)Words importing the plural include the singular.

(3)Words importing the masculine gender include the feminine.

(b)The word—

(1)“Must” is used in an imperative sense.

(2)‘May” is used in a permissive sense to state authority or permission to do the act prescribed, and the words “no person may” or “a person may not” mean that no person is required, authorized, or permitted to do the act prescribed.

(3)“Includes” means “includes but is not limited to.”

(4)“President” means the President of the General Authority of Civil Aviation (GACA) or his delegated officials.

(5)“GACA” means the Safety, Security and Air Transport Sector of the General Authority of Civil Aviation unless otherwise noted.

(c)For ICAO Standards and Recommended Practices incorporated by reference, the ICAO verb “shall” for Standards is considered to be equivalent to “must”. The ICAO verb “should” for Recommended Practices is considered to be equivalent to “may” unless the Recommended Practice is specifically prescribed as mandatory in the GACAR requirements that refer to the relevant Recommended Practice.

(d)Where two sets of units are quoted it must not be assumed that the pairs of values are equal and interchangeable. It may, however, be inferred that an equivalent level of safety is achieved when either set of units is used.

(e)The GACAR is organized according to the follow format (descending order):

(1)Chapters (e.g. Chapter A – General Provisions)

(2)Parts (e.g. GACAR Part 5 – Safety Management Systems)

(3)Subparts (e.g. Subpart A – General)

(4)Sections (e.g. § 5.3 General Requirements)

(5)Paragraphs and Sub-Paragraphs (e.g. § 5.3(a), § 5.3(a)(1), etc.)

(6)Appendices

§1.23 Presentation of Changes.

(a)Each section that is added, amended or corrected as a result of formal rulemaking action will be identified by the amendment number and effectivity date under which it is added, amended or corrected.

(b)New, amended and corrected text will be enclosed within heavy square brackets [ ] until a subsequent 'Change' is issued.

Example:

Original text:

§ 5.1 Applicability.

This part applies to each aviation organization (certificate holder) under-

(a) General Authority of Civil Aviation (GACAR) Part 119 and authorized to conduct operationsinaccordancewiththerequirementsofGACARParts121,125 or 135;

(b) GACAR Part 139 (except Heliports);

(c) GACAR Part 141;

(d) GACAR Parts 142 and 143 who are operating aircraft;

(e) GACAR Part 145; or

(f) GACAR Part 171.

First amended text (sample only):

§ 5.1 Applicability.

This part applies to each aviation organization (certificate holder) under-

(a) General Authority of Civil Aviation (GACAR) Part 119 and authorized to conduct operationsinaccordancewiththerequirementsofGACARParts121,125 or 135;

(b) GACAR Part 139 (except Heliports);

(c) GACAR Part 141;

(d) GACAR Parts 142 and 143 who are operating aircraft;

(e) GACAR Part 145;

(f) GACAR Part 171; or [(g) GACAR Part173.]

[Amendment 5-1; Effective January 11, 2015]

Second amended text (sample only):

§ 5.1 Applicability.

This part applies to each aviation organization (certificate holder) under-

(a) General Authority of Civil Aviation (GACAR) Part 119 and authorized to conduct operationsinaccordancewiththerequirementsofGACARParts121,125 or 135;

(b) GACAR Part 139 (except Heliports);

(c) GACAR Part141;

(d) GACAR Parts 142 and 143 who are operating aircraft.

(e) GACAR Part145;(f)GACAR Part171;

(g) GACAR Part 173; or [(h) GACAR Part175.]

Amendment 5-1; Effective January 11, 2015

[Amendment 5-2; Effective March 11, 2020]