

	<p style="text-align: center;">TANZANIA CIVIL AVIATION AUTHORITY DIRECTORATE OF SAFETY REGULATIONS AIR NAVIGATION INSPECTORATE</p>	<p>Revision: 0</p> <p style="text-align: center;">Advisory Circular</p>
<p>Document No.: TCAA/QSP/SR/AC/ANI - 55</p>	<p>Title: Standard Definitions in provision of Aeronautical Information Products and Services</p>	<p>Page 1 of 7</p>

0.1 PURPOSE

- 0.1.1 This Advisory Circular (AC) provides standard definitions to be used in provision of Aeronautical Information Products and Services.
- 0.1.2 The Air Navigation Services Provider shall consider the definitions contained in this Advisory Circular as mandatory definitions when developing the operational Manuals and whenever they provide the Aeronautical Information Products and Services.

0.2 REFERENCES

- 0.2.1 ICAO Annex 15 – Aeronautical Information Services
- 0.2.2 The Civil Aviation (Aeronautical Information Services) Regulations, 2025

0.3 DEFINITIONS

The following terms shall have the following meaning when used in developing the Air Navigation Services Provider Operational Manuals and whenever they provide Aeronautical Information Products and Services

- “Aerodrome” means 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 Mapping Data (AMD)” means data collected for the purpose of compiling aerodrome mapping information;
- “Aerodrome Mapping Database (AMDB)” means a collection of aerodrome mapping data organized and arranged as a structured data set;
- “Aeronautical chart” means a representation of a portion of the Earth, its culture and relief, specifically designated to meet the requirements of air navigation;
- “Aeronautical data” means a representation of aeronautical facts, concepts or instructions in a formalized manner suitable for communication, interpretation or processing;
- “Aeronautical fixed service (AFS)” means a telecommunication service between specified fixed points provided primarily for the safety of air navigation and for the regular, efficient and economical operation of air services.
- “Aeronautical information” means information resulting from the assembly, analysis and formatting of aeronautical data;
- “Aeronautical Information Circular (AIC)” means a notice containing information that does not qualify for the origination of a NOTAM or for inclusion in the AIP, but which relates to flight safety, air navigation, technical, administrative or legislative matters;

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“Aeronautical information management (AIM)” means 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” means an 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:

- (a) Aeronautical Information Publication (AIP), including Amendments and Supplements;
- (b) Aeronautical Information Circulars (AIC);
- (c) aeronautical charts;
- (d) NOTAM; and
- (e) digital data sets;

“Aeronautical Information Publication (AIP)” means 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)” means 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;

“AIP Amendment” means Permanent changes to the information contained in the AIP;

“AIP Supplement” means temporary changes to the information contained in the AIP which are published by means of special pages;

“AIRAC” means “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;

“Air defence identification zone (ADIZ)” means 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 traffic management (ATM)” means 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 provision of facilities and seamless services in collaboration with all parties and involving airborne and ground-based functions.

“Application” means manipulation and processing of data in support of user requirements (ISO 19104*);

“Area navigation (RNAV)” means 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;

“ASHTAM” means 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” means a process of merging data from multiple sources into a database and establishing a baseline for subsequent processing;

“ATS surveillance service” means a term used to indicate a service provided directly by means of an ATS surveillance system;

“ATS surveillance system” means a generic term meaning variously, ADS-B, PSR, SSR or any comparable ground-based system that enables the identification of aircraft;

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- “Automatic dependent surveillance — broadcast (ADS-B)” means a means by which aircraft, aerodrome vehicles and other objects can automatically transmit and/or receive data such as identification, position and additional data, as appropriate, in a broadcast mode via a data link;
- “Automatic dependent surveillance — contract (ADS-C)” means 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;
- “Automatic terminal information service (ATIS)” means the automatic provision of current, routine information to arriving and departing aircraft throughout 24 hours or a specified portion thereof:-
- (a) “Data link-automatic terminal information service (D-ATIS)” means the provision of ATIS via data link;
 - (b) “Voice-automatic terminal information service (Voice-ATIS)” means the provision of ATIS by means of continuous and repetitive voice broadcasts;
- “Bare Earth” means a surface of the Earth including bodies of water and permanent ice and snow, and excluding vegetation and manmade objects;
- “Calendar” means discrete temporal reference system that provides the basis for defining temporal position to a resolution of one day (ISO 19108*);
- “Canopy” means bare Earth supplemented by vegetation height;
- “Confidence level” means the probability that the true value of a parameter is within a certain interval around the estimate of its value;
- “Controller-pilot data link communications (CPDLC)” means a means of communication between controller and pilot, using data link for ATC communications;
- “Culture” means all man-made features constructed on the surface of the Earth, such as cities, railways and canals;
- “Cyclic redundancy check (CRC)” means a mathematical algorithm applied to the digital expression of data that provides a level of assurance against loss or alteration of data;
- “Danger area” means an airspace of defined dimensions within which activities dangerous to the flight of aircraft may exist at specified times;
- “Data accuracy” means a degree of conformance between the estimated or measured value and the true value;
- “Data completeness” means the degree of confidence that all of the data needed to support the intended use is provided;
- “Data format” means a structure of data elements, records and files arranged to meet standards, specifications or data quality requirements;
- “Data integrity (assurance level)” means a degree of assurance that an aeronautical data and its value has not been lost or altered since the origination or authorized amendment;
- “Data product” means a data set or data set series that conforms to a data product specification (ISO 19131*).
- “Data product specification” means a 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*).
- “Data quality” means a degree or level of confidence that the data provided meet the requirements of the data user in terms of accuracy, resolution, integrity (or equivalent assurance level), traceability, timeliness, completeness and format;

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“Data resolution” means a number of units or digits to which a measured or calculated value is expressed and used.

“Data set” means an identifiable collection of data (ISO 19101*).

“Data set series” means a collection of data sets sharing the same product specification (ISO 19115*);

“Data timeliness” means the degree of confidence that the data is applicable to the period of its intended use;

“Data traceability” means 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.

“Datum” means any quantity or set of quantities that may serve as a reference or basis for the calculation of other quantities (ISO 19104*).

“Digital Elevation Model (DEM)” means the representation of terrain surface by continuous elevation values at all intersections of a defined grid, referenced to common datum;

“Direct transit arrangements” means 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;

“Ellipsoid height (geodetic height)” means the height related to the reference ellipsoid, measured along the ellipsoidal outer normal through the point in question;

“Feature” means abstraction of real world phenomena (ISO 19101*);

“Feature attribute” means characteristic of a feature (ISO 19101*);

“Feature operation” means operation that every instance of a feature type may perform (ISO 19110*);

“Feature relationship” means relationship that links instances of one feature type with instances of the same or a different feature type (ISO 19101*);

“Feature type” means class of real world phenomena with common properties (ISO 19110*);

“Geodesic distance” means the shortest distance between any two points on a mathematically defined ellipsoidal surface.

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

“Geoid undulation” means the distance of the geoid above, positive, or below, negative, the mathematical reference ellipsoid;

“Gregorian calendar” means 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*);

“Height” means the vertical distance of a level, point or an object considered as a point, measured from a specific datum;

“Heliport” means 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;

“Human Factors principles” means 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;

“Information service” means a type of service in a service-oriented architecture that provides an ATM-related information-sharing capability;

“Integrity classification (aeronautical data)” means classification based upon the potential risk resulting from the use of corrupted data. Aeronautical data are classified as:

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- (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 for catastrophe;
- (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.

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

“International NOTAM Office (NOF)” means an office designated by a State for the exchange of NOTAM internationally;

“Logon address” means a specified code used for data link logon to an ATS unit;

“Manoeuvring area” means that part of an aerodrome to be used for the take-off, landing and taxiing of aircraft, excluding aprons;

“Metadata” means data about data (ISO 19115*);

“Minimum en-route altitude (MEA)” means 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 obstacle clearance altitude (MOCA)” means the minimum altitude for a defined segment of flight that provides the required obstacle clearance;

“Movement area” means that part of an aerodrome to be used for the take-off, landing and taxiing of aircraft, consisting of the manoeuvring area and the apron;

“Navigation specification” means 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:

- (a) “Required navigation performance (RNP) specification” means navigation specification based on area navigation that includes the requirement for performance monitoring and alerting, designated by the prefix RNP, RNP 4 or RNP APCH;
- (b) “Area navigation (RNAV) specification” means a navigation specification based on area navigation that does not include the requirement for performance monitoring and alerting, designated by the prefix RNAV, RNAV 5 or RNAV 1;

“Next intended user” means the entity that receives the aeronautical data or information from the aeronautical information service.

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

“Obstacle” means 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

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(c) stand outside those defined surfaces and that have been assessed as being a hazard to air navigation.

“Obstacle or Terrain data collection surface” means a defined surface intended for the purpose of collecting obstacle or terrain data;

“Origination (aeronautical data or aeronautical information)” means 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 information)” means an entity that is accountable for data or information origination and/or from which the AIS organization receives aeronautical data and aeronautical information.

“Orthometric height” means a height of a point related to the geoid, generally presented as an MSL elevation;

“Performance-Based Communication (PBC)” means communication based on performance specifications applied to the provision of air traffic services;

“Performance-Based Navigation (PBN)” means area navigation based on performance requirements for aircraft operating along an ATS route, on an instrument approach procedure or in a designated airspace;

“Performance-Based Surveillance (PBS)” means a surveillance based on performance specifications applied to the provision of air traffic services;

“Portrayal” means a presentation of information to humans (ISO 19117*).

“Position (geographical)” means a set of coordinates (latitude and longitude) referenced to the mathematical reference ellipsoid which define the position of a point on the surface of the Earth;

“Post spacing” means an angular or linear distance between two adjacent elevation points;

“Precision” means the smallest difference that can be reliably distinguished by a measurement process;

“Pre-flight Information Bulletin (PIB)” means a presentation of current NOTAM information of operational significance, prepared prior to flight;

“Prohibited area” means an airspace of defined dimensions, above the land areas or territorial waters of a State, within which the flight of aircraft is prohibited;

“Quality” means a degree to which a set of inherent characteristics fulfils requirements (ISO 9000*);

“Quality assurance” means part of quality management focused on providing confidence that quality requirements will be fulfilled (ISO 9000*);

“Quality control” means part of quality management focused on fulfilling quality requirements (ISO 9000*);

“Quality management” means coordinated activities to direct and control an organization with regard to quality (ISO 9000*);

“Radio navigation service” means a service providing guidance information or position data for the efficient and safe operation of aircraft supported by one or more radio navigation aids.

“Required Communication Performance (RCP)” means a set of requirements for air traffic service provision and associated ground equipment, aircraft capability, and operations needed to support performance-based communication.

“Required Surveillance Performance (RSP)” means a set of requirements for air traffic service provision and associated ground equipment, aircraft capability, and operations needed to support performance-based surveillance;

“Requirement” means a need or expectation that is stated, generally implied or obligatory (ISO 9000*);

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- “Restricted area” means 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;
- “Route stage” means a route or portion of a route flown without an intermediate landing;
- “SNOWTAM” means 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.
- “Station declination” means an alignment variation between the zero degree radial of a VOR and true north, determined at the time the VOR station is calibrated;
- “Terrain” means 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;
- “Traceability” means ability to trace the history, application or location of that which is under consideration (ISO 9000*);
- “Validation” means confirmation, through the provision of objective evidence, that the requirements for a specific intended use or application have been fulfilled (ISO 9000*);
- “Verification” means confirmation, through the provision of objective evidence, that specified requirements have been fulfilled (ISO 9000*); and
- “VOLMET” means meteorological information for aircraft in flight;
- (a) “Data Link-VOLMET (D-VOLMET)” means a 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;
 - (b) “VOLMET broadcast” means provision, as appropriate, of current METAR, SPECI, TAF and SIGMET by means of continuous and repetitive voice broadcasts.



Tanzania Civil Aviation Authority