eEAD Data Catalogue

Catalogue Name	ANNEX 2_eEAD Data Catalogue	**Catalogue Version**	Released_V 7.0	**Date**	23-Mar-18	**Authors/ Contributors**	Nil Agacdiken, Sipan Asatryan, Emmanuel Dettwiller, Razvan Guleac, Razvan Margauan, Boris Kummer, Peter Matern, Idalina Mendes, Eduard Porosnicu, Alexander Shutov, Yves Steyt, Guido Van Laethem, Luc Vermeulen and other members of the EAIM Unit.

The eEAD Data Catalogue is a general description of the eEAD Data scope capturing the data requirements to meet the eEAD needs as specified within the eEAD CONOPS.

It provides:

- a list of the data within the eEAD scope in business terms;
- an indication of the required Minimum Geographical Coverage of each data element;
- where appropriate, an indication of the data exchange specification (such as AIXM 5.1, ADR Extension, etc.) supporting the encoding of the corresponding data element.

Note: *the data exchange specification might contain more precise details about each data element (such as lists of values, additional sub-properties, business rules, provision of reasons for missing data, provision of multilingual data/free text comments, etc.). The data exchange specification shall be considered normative for the system design and implementation. The eEAD Data Catalogue indication is only informative.*

The eEAD Data Catalogue is constructed as follows:

The tabs in this spreadsheet are broken down to represent the eEAD AIS/ACFT data subjects, properties and sub-properties.

Most columns are self-explanatory - a note about:

Modelling Reference - an indication (i.e. not a full mapping) of which data model can and will be used for B2B export of the eEAD Data. Where "None" a model extension will be required.

Annex 15 IOP Data - an indication that this data is considered part of the Annex 15 IOP Data as defined in the eEAD CONOPS. The Annex 15 IOP Data is the reference data source for the European ATM Network operations, covering the aeronautical data needed for the processing of world-wide NOTAM and for ATM operations.

Minimum Geographical Coverage - the following areas of operation are identified and used to define the minimum geographical coverage of the data:

- ECAC Area/Region - ECAC Area/Region is specified in the: *https://www.ecac-ceac.org/member-states*.
- ECAC+ Area/Region - ECAC+ Area/Region is specified within the “2398 - Minimum Static and Dynamic Data Requirements” document.
- NM Area - NM Area is specified in the: *http://www.nm.eurocontrol.int/STATIC/NM_AREA/*.
- ENV_EXTR - ENV_EXTR is specified in the: *http://www.nm.eurocontrol.int/STATIC/NM_AREA/*.
- AFUA Area - List of FUA participating AMC’s: EB, ED, EE, EF, EG, EH, EK, EN, EP, ES, EV, EY, LB, LC, LD, LE, LF, LG, LH, LI, LK, LO, LP, LR, LS, LZ, UK.
- World Wide - Whole world.
- EWD - designates “European World-Wide Destinations”, which are considered to be all the airports outside ECAC that are flown directly from the top 30 ECAC airports. Statistical data provided by ACI and web sites such as http://www.flightconnections.com may be used in order to provide the data for this estimation.

Business Data Scope

The business data scope of the eEAD covers:

- The AIS Data described within the ICAO Doc 10066, ICAO Procedures for Air Navigation Services - Aeronautical Information Management (PANS-AIM).
- Aircraft Type Characteristics and Performance (ACFT) Data described within the BADA-3 User Manual / BADA-4 User Manual and ICAO Document 8585: Designators for Aircraft Operating Agencies, Aeronautical Authorities and Services.

Note 1: there are two types of the BADA Data parameters presented in the eEAD Data Catalogue:

a) Data parameters for each aircraft type which specify aircraft performances in terms of true air speed, rate of climb/descent and fuel flow for conditions of climb, cruise and descent at various flight levels, aircraft weight and ISA conditions. These performance figures are calculated based on a total-energy model and BADA coefficients. The bloc called “Aircraft Performance” in the Data Catalogue “ACFT” part contains this kind of data. It comes from the BADA PTF, PTD, PTF files. This is valid for BADA 3 and BADA 4.

b) Data parameters which represent aircraft-specific coefficients necessary to calculate aircraft performances using the BADA model algorithms (described in documents) which is based on a kinetic approach to aircraft performance modelling. This data is provided in the ‘Operations Performance Model”, “Airline Procedure Model” and “Global Aircraft parameters” for BADA 3 and BADA 4.

Please Note

Where possible descriptions are repeated within the catalogue for readability reasons, however those within the above documents remain the official definitions. For properties without a description in the reference documents: AIXM 5.1 is referred.

Subject	Property	Sub-Property	Description	Modelling Reference	Annex 15 IOP Data	Minimum Geographical Coverage	Remark
AERODROME/HELIPORT							
Aerodrome/Heliport							
Aerodrome/Heliport			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/helicopters.				*The WW Aerodromes IFR/VFR/MIL etc. (not published in the AIP's of the States) data are subject of retrieval from the other sources such as ICAO DOC 7910, IATA Resolution 767, etc.*
	Designator		Designator of the aerodrome/heliport.				
		Location Indicator ICAO	The four letter ICAO location indicator of the aerodrome/heliport, as listed in ICAO DOC 7910.	AIXM 5.1 Core	X	World Wide	
		Designator IATA	The identifier that is assigned to a location in accordance with rules (resolution 767) governed by the International Air Transport Association (IATA).	AIXM 5.1 Core	X	World Wide	
		Other	A locally defined airport identifier, if other than an ICAO Location Indicator.	AIXM 5.1 Core	X	World Wide	
	Name		The primary official name of an aerodrome as designated by an appropriate authority.	AIXM 5.1 Core	X	World Wide	
	Type		A code specifying the type of aerodrome. For example, aerodrome only, combined aerodrome/heliport or simple landing site.	AIXM 5.1 Core	X	World Wide	
	Served City (Location)		The full name (free text) of the city or town the aerodrome/heliport is serving.	AIXM 5.1 Core	X	World Wide	
	Type of Traffic Permitted		Type of traffic permitted to use the aerodrome/heliport.				
		International/National	Indication if international and/or national flights are permitted at the aerodrome/heliport.	AIXM 5.1 Core	X	NM Area+ ECAC+	
		IFR/VFR	Indication if IFR and/or VFR flights are permitted at the aerodrome/heliport.	AIXM 5.1 Core	X	NM Area+ ECAC+	
		Scheduled/Non-Scheduled	Indication if scheduled and/or nonscheduled flights are permitted at the aerodrome/heliport.	AIXM 5.1 Core	X	NM Area+ ECAC+	
		Civil/Military	Indication if civil commercial aviation and/or general aviation and/or mil. flights are permitted at the aerodrome/heliport.	AIXM 5.1 Core	X	NM Area+ ECAC+	
		Restricted Use	Indication if an aerodrome or heliport not open for the public (Only for the use of the owners).	AIXM 5.1 Core	X	NM Area+ ECAC+	
	Heliport Type		The type of the heliport as mention in Annex 14 Volume II (Surface-level, elevated, shipboard or helideck).	AIXM 5.1 Core	X	World Wide	
	Certified ICAO		Indicating that the Aerodrome is certified according to the ICAO rules (YES/NO).	AIXM 5.1 Core		ECAC	
	Certification Date		The date when the Aerodrome certification has been issued by the supervising authority.	AIXM 5.1 Core		ECAC	
	Certification Expiration Date		The date when the Aerodrome certification will become invalid.	AIXM 5.1 Core		ECAC	
	Control Type		Indication if an aerodrome is under civil control, military control or joint control.	AIXM 5.1 Core	X	NM Area+ECAC	
	Field Elevation		The vertical distance above Mean Sea Level (MSL) of the highest point of the landing area.				
		Elevation	The value of the aerodrome elevation. The vertical distance to the highest point on the landing area of the aerodrome from Mean Sea Level.	AIXM 5.1 Core	X	NM Area+ ECAC+	
		Geoid Undulation	A distance separating the geoid and the ellipsoid at that position. In respect of WGS-84 geodetic datum, the difference between the WGS-84 ellipsoidal height and geoidal height represents geoidal undulation.	AIXM 5.1 Core	X	NM Area+ ECAC+	
	Reference Temperature		The monthly mean of the daily maximum temperatures for the hottest month of the year at an aerodrome.	AIXM 5.1 Core		ECAC	
	Mean Low Temperature		The mean lowest temperature of the coldest month of the year.	AIXM 5.1 Core		ECAC	

	Magnetic Variation		The angular difference between True North and Magnetic North measured at a given position and date.				
		Angle	The magnetic variation angle value.	AIXM 5.1 Core	X	NM Area+ECAC	
		Date	The date on which the magnetic variation had this value.	AIXM 5.1 Core	X	NM Area+ECAC	
		Annual Change	The annual rate of change of the magnetic variation.	AIXM 5.1 Core	X	NM Area+ECAC	
	Aerodrome Reference Point (ARP)		The designated geographic location of an aerodrome as established by the appropriate authority. (The aerodrome reference point shall be located near the initial or planned geometric centre of the aerodrome and shall normally remain where first established.)				
		Position	A geographic position of the Aerodrome/Heliport reference point. The aerodrome reference point shall be located near the initial or planned geometric centre of the aerodrome.	AIXM 5.1 Core	X	World Wide	
		Site	Site of ARP on the Aerodrome.	AIXM 5.1 Core	X	World Wide	
		Direction	Direction of aerodrome reference point from centre of the city or town which the aerodrome serves.	AIXM 5.1 Core	X	World Wide	
		Distance	Distance of aerodrome reference point from centre of the city or town which the aerodrome serves.	AIXM 5.1 Core	X	World Wide	
	Collocation Information		An Aerodrome can be geographically collocated with another Aerodrome.	AIXM 5.1 Core	X	World Wide	
	Availability		The operational status of the Aerodrome/Heliport (operational status, warning, Airport/Heliport usage conditions and condition combination).	AIXM 5.1 Core	X	World Wide	
Landing Direction Indicator			A device to indicate visually the direction currently designated for landing and for take-off.				
	Location		Location of landing direction indicator.	AIXM 5.1 Core		ECAC	
	Lighting		Lighting of landing direction indicator.	AIXM 5.1 Core		ECAC	
Secondary Power Supply			The availability of emergency power supply for the Aerodrome/heliport.				
	Characteristics		The description of the secondary power supply.	AIXM 5.1 Core		ECAC	
	Switch-Over Time		Secondary power supply switch-over time.	AIXM 5.1 Core		ECAC	
Anemometer			A device used for measuring (observing and reporting) of surface wind speed, and is a common weather station instrument for the Aerodrome/ heliport.				
	Location		Location of anemometer.	AIXM 5.1 Core		ECAC	
	Lighting		Lighting (if any) of anemometer.	AIXM 5.1 Core		ECAC	
	Availability		The operational status of the Anemometer.	AIXM 5.1 Core		ECAC	
Aerodrome/Identification Beacon (ABN/IBNA)			Aerodrome beacon / identification beacon used to indicate the location of an aerodrome from the air.				
	Location		Location of aerodrome beacon/identification beacon.	AIXM 5.1 Core		ECAC+EWD	
	Characteristics		Description of aerodrome beacon/identification beacon.	AIXM 5.1 Core		ECAC+EWD	
	Hours of Operation		Hours of operation of aerodrome/identification beacon.	AIXM 5.1 Core		ECAC+EWD	
Wind Direction Indicator (WDI)			A device that indicates the direction and the intensity of the wind.				
	Location		Location of Wind direction indicator.	AIXM 5.1 Core		ECAC	
	Lighting		Lighting of Wind direction indicator.	AIXM 5.1 Core		ECAC	
Altimeter Source			An instrument that measures and indicates the elevation at which an object, such as an airplane, is located.				
	Is Remote		Indications if the Altimeter is Remote or Local.	AIXM 5.1 Core		ECAC	
	Is Primary		Indicates if the Altimeter is Primary or Secondary.	AIXM 5.1 Core		ECAC	
	Availability		Information about the operational status of the Altimeter Source.	AIXM 5.1 Core		ECAC	
Survey Control Point			A monumented survey control point.				
	ID Number		Special unique identifier permanently assigned to a feature instance by the data provider.	AIXM 5.1 Core		ECAC	
	Location		Geographical location of the survey control point.	AIXM 5.1 Core		ECAC	
	Elevation		Elevation of survey control point.	AIXM 5.1 Core		ECAC	
Service Roads			An established surface route on the aerodrome meant for the exclusive use of authorized vehicles and personnel.				
	Geometry		Geographical location of the service roads.	AIXM 5.1 Core		ECAC	

	Feat Base		Identification of the feature type affected.	AIXM 5.1 Core		ECAC	
	ID Base		Name of the underlying taxiway/parking stand area or apron.	AIXM 5.1 Core		ECAC	
Non Movement Area			Area where aircraft cannot be seen by a control tower and therefore are restricted to move.				
	Geometry		Geographical location of the non-movement area.	AIXM 5.1 Core		ECAC	
Work/Construction Area			Part of a movement area under construction.				
	Type		The type of work performed in the work area (CONSTRUCTION, SURFACEWORK, etc.).	AIXM 5.1 Core		ECAC+EWD	
	Planned Operational		Date when the activities in the construction area are expected to be operational.	AIXM 5.1 Core		ECAC+EWD	
	Geometry		Geographical location of the work/construction area.	AIXM 5.1 Core		ECAC+EWD	
	Activation		Time period during which the building site is active or not.	AIXM 5.1 Core		ECAC+EWD	
Aircraft Movement Unsuitable Area			Areas unsuitable for aircraft movement.				
	Geometry		Depicted movement area permanently unsuitable for aircraft, clearly identified as such.	AIXM 5.1 Core		ECAC	
Aerodrome/Heliport Protection Area			An area situated in the vicinity of a runway, FATO or TLOF, provided to protect aircraft during manoeuvring, take-off and/or landing operations.				
	Width		The value of the physical width of the protection area.	AIXM 5.1 Core		ECAC	
	Length		The value of the physical length of the protection area.	AIXM 5.1 Core		ECAC	
	Lighting		The availability of a lighting system that visually identified the Protection Area in low visibility conditions.	AIXM 5.1 Core		ECAC	
	Obstacle Free		Indicates if the protection area is obstacle free.	AIXM 5.1 Core		ECAC	
	Surface Properties		The surface characteristics of the Aerodrome/Heliport Protection Area.	AIXM 5.1 Core		ECAC	
	Geometry		Geographical location of the protection area.	AIXM 5.1 Core		ECAC	
	Status		Temporal description of the operational state of the Aerodrome/Heliport Protection Area. This attribute is used to describe real-time status.	AIXM 5.1 Core		ECAC	
Frequency Area			Designated part of a surface movement area where a specific frequency is required by air traffic control or ground control.				
	Station		Name of the station providing the service.	AIXM 5.1 Core		ECAC	
	Frequency		Frequency of the station providing the service.	AIXM 5.1 Core		ECAC	
	Boundary		Area boundary of the frequency area.	AIXM 5.1 Core		ECAC	
Runway Visual Range (RVR) Observation Site			A meteorological equipment providing information about the distance over which the pilot of an aircraft on the centre line of a runway can see the runway surface markings or the lights delineating the runway or identifying its centre line.				
	Position		Geographical location of runway visual range (RVR) observation sites.	AIXM 5.1 Core		NM Area	
Hot Spot			A location on aerodrome movement area with a history or potential risk of collision or runway incursion, and where heightened attention by pilots/drivers is necessary.				
	Identifier		A coded identifier by which the hot spot is labelled on Aerodrome maps.	AIXM 5.1 Core		ECAC	
	Geometry		The shape of the hot spot.	AIXM 5.1 Core		ECAC	
Runway							
Runway			A defined rectangular area on a land aerodrome prepared for the landing and take-off of aircraft. (Annex 14).				
	Designator		The full textual designator of the runway, used to uniquely identify it at an aerodrome/heliport which has more than one. E.g. 09/27, 02R/20L, RWY.	AIXM 5.1 Core	X	World Wide	
	Nominal Length		The declared longitudinal extent of the runway for operational (performance) calculations.	AIXM 5.1 Core	X	ECAC+EWD	
	Nominal Width		The declared transversal extent of the runway for operational (performance) calculations.	AIXM 5.1 Core	X	ECAC+EWD	
	Geometry		Geometries of Runway Element, Runway Displaced Area and Runway Intersection.	AIXM 5.1 Core		ECAC	

Centerline Points		The profile of the centre line of the runway (including beginning and End of the centerline / the elevation of the runway centre line at each end of the runway, at the stopway, at the origin of each take-off and approach area, and at each significant change of slope of runway/stopway.				
	Position	The geographical location of runway centre line at each end of the runway, at the stopway and at the origin of each take-off flight path area, and at each significant change in slope of runway and stopway.	AIXM 5.1 Core	X	ECAC+EWD	
	Elevation	The vertical distance of the position from Mean Sea Level. The geoidal height of the position.	AIXM 5.1 Core	X	ECAC	
	Geoid Undulation	A distance separating the geoid and the ellipsoid at that position. In respect of WGS-84 geodetic datum, the difference between the WGS-84 ellipsoidal height and geoidal height represents geoidal undulation.	AIXM 5.1 Core		ECAC	
Runway Exit Line		Guidance line painted on the runway exit described using line geometry and associated with both Aerodrome/Heliport class and Taxiway Guidance Line.				
	Exit Guidance Line	The geographical location of the runway exit line.	AIXM 5.1 Core		ECAC	
	Colour	Colour of runway exit line.	AIXM 5.1 Core		ECAC	
	Style	Style of runway exit line.	AIXM 5.1 Core		ECAC	
	Directionality	Directionality of RWY exit line (one-way or two-way).	AIXM 5.1 Core		ECAC	
Surface Type		The surface type of the runway defined as specified in Annex 14 Volume I.	AIXM 5.1 Core	X	ECAC	
Strength		The properties that model characteristics of an runway surface. The surface strength, in character format. For example, 80/R/B/W/T for a PCN type value.				
	PCN	Pavement classification number.	AIXM 5.1 Core	X	NM Area	
	Pavement Type	Pavement type for aircraft classification number - pavement classification number (ACN-PCN) determination.	AIXM 5.1 Core		ECAC	
	Subgrade Category	Subgrade strength category.	AIXM 5.1 Core		ECAC	
	Allowable Pressure	Maximum allowable tire pressure category or maximum allowable tire pressure value.	AIXM 5.1 Core		ECAC	
	Evaluation Method	The evaluation method used.	AIXM 5.1 Core		ECAC	
Strip		A defined area including the runway and the stop-way if provided 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.				
	Length	The longitudinal extent of the runway strip.	AIXM 5.1 Core		ECAC	
	Width	The transversal extent of the runway strip.	AIXM 5.1 Core		ECAC	
	Surface Type	Surface type of runway strip. The composition of the runway strip surface. For example, asphalt, concrete etc..	AIXM 5.1 Core		ECAC	
	Transverse Slope	A value specifying the transverse slope of the strip.	AIXM 5.1 Core		ECAC	
	Longitudinal Slope	A value specifying the longitudinal slope of the strip.	AIXM 5.1 Core		ECAC	
Shoulder		An area adjacent to the edge of a pavement so prepared as to provide a transition between the pavement and the adjacent surface.				
	Geometry	Geometry of the runway shoulders.	AIXM 5.1 Core		ECAC	
	Surface Type	Surface type of runway shoulder. A code indicating the composition of the runway shoulder surface. For example, asphalt, concrete etc.	AIXM 5.1 Core		ECAC	
	Width	The value of the physical width of the runway shoulder.	AIXM 5.1 Core		ECAC	
Blast Pad		Specially prepared surface placed adjacent to the end of a runway to eliminate the erosive effect of the high wind forces produced by airplanes at the beginning of their take-off roll.				
	Geometry	The geographical location of the blastpad.	AIXM 5.1 Core		ECAC	
Obstacle Free Zone		The existence of an obstacle-free zone for precision approach runway category I.	AIXM 5.1 Core		ECAC	
Runway Marking		A symbol or group of symbols displayed on the surface of the runway.				

	Marking Location	The geographical location of the runway marking.	AIXM 5.1 Core		ECAC	
	Description	Description of the runway markings.	AIXM 5.1 Core		ECAC	
	Type	Type of runway marking related to landing categories such as precision, non-precision and basic.	AIXM 5.1 Core		ECAC	
RWY Center Line Lights		Lights embedded into the surface of the runway at 50 ft (15 m) intervals along the runway centerline on some precision instrument runways.				
	Length	The longitudinal extent of the runway centre line lights.	AIXM 5.1 Core		ECAC+EWD	
	Spacing	Spacing of runway centre line lights.	AIXM 5.1 Core		ECAC+EWD	
	Colour	Colour of runway centre line lights.	AIXM 5.1 Core		ECAC+EWD	
	Intensity	Intensity of runway centre line lights.	AIXM 5.1 Core		ECAC+EWD	
	Position	Geographical location of each individual light of the runway center line lights.	AIXM 5.1 Core		ECAC	
	Ground Lighting Availability	An indication of the operational status of the lighting system. The list of values include: "in construction", "operational", "unavailable".	AIXM 5.1 Core		ECAC+EWD	
RWY Edge Lights		Elevated lights that run the length of the runway on either side.				
	Length	The longitudinal extent of the runway edge lights.	AIXM 5.1 Core		ECAC+EWD	
	Spacing	Spacing of runway edge lights.	AIXM 5.1 Core		ECAC+EWD	
	Colour	Colour of runway edge lights.	AIXM 5.1 Core		ECAC+EWD	
	Intensity	Intensity of runway edge lights.	AIXM 5.1 Core		ECAC+EWD	
	Position	Geographical location of each individual light of the runway edge lights.	AIXM 5.1 Core		ECAC	
	Ground Lighting Availability	An indication of the operational status of the lighting system. The list of values include: "in construction", "operational", "unavailable".	AIXM 5.1 Core		ECAC+EWD	
Reference Code		The intent of the reference code is to provide a simple method for interrelating the numerous specs concerning the characteristics of aerodromes so as to provide a series of aerodrome facilities that are suitable for the aeroplanes that are intended to operate at the aerodrome.				
	Number	A number based on the aeroplane reference field length.	AIXM 5.1 Core		ECAC	
	Letter	A letter based on the aeroplane wingspan and outer main gear wheel span.	AIXM 5.1 Core		ECAC	
Restriction		Restrictions relating to the runway (such as weight restrictions, etc.).	AIXM 5.1 Core	X	ECAC	
Runway Direction		One of the two landing and take-off directions of a runway for which attributes like TORA, TODA, etc. may be defined.				
Designator		The full textual designator of the landing and take-off direction. Examples: 27, 35L, 01R.	AIXM 5.1 Core	X	World Wide	
True Bearing		The measured angle between the runway direction and True North at a given position.	AIXM 5.1 Core	X	ECAC	
Type		Precision (CAT I, II, III) / nonprecision / non-instrument.	AIXM 5.1 Core	X	ECAC	
Threshold		The runway thresholds are markings across the runway that denote the beginning and end of the designated space for landing and takeoff under non-emergency conditions.				
	Position	Geographical coordinates for each threshold and runway.	AIXM 5.1 Core	X	ECAC+EWD	
	Elevation	Elevation of the runway threshold.	AIXM 5.1 Core	X	ECAC+EWD	
	Geoid Undulation	WGS-84 Geoid undulation at Threshold Position.	AIXM 5.1 Core		ECAC	
	Threshold Type	The indication if the threshold is displaced/not displaced. A displaced threshold is not located at the extremity of RWY.	AIXM 5.1 Core	X	ECAC+EWD	
	Displacement	Displaced threshold distance.	AIXM 5.1 Core		ECAC+EWD	
Runway End		Runway end (flight path alignment point).				
	Position	Location of the runway end in the direction of departure.	AIXM 5.1 Core	X	ECAC+EWD	
	Elevation	Elevation of the end postion of the runway.	AIXM 5.1 Core	X	ECAC+EWD	
Departure End of Runway		Departure end of the runway (DER), which is the end of the area declared suitable for take-off (i.e. the end of the runway or, where a clearway is provided, the end of the clearway).				
	Position	Geographical location of DER.	AIXM 5.1 Core	X	ECAC+EWD	

	Elevation	The elevation of DER is the elevation of the end of the RWY or the elevation of the end of the clearway, whichever is higher.	AIXM 5.1 Core	X	ECAC+EWD	
Touch Down Zone		The Touchdown zone is the portion of a runway, beyond the threshold, intended as the first point of contact between landing aircraft and the runway.				
	Elevation	Highest elevation of the touchdown zone of a precision approach runway.	AIXM 5.1 Core		ECAC	
	Length	Touch down zone length.	AIXM 5.1 Core		ECAC	
	Length of TDZ Lights	The length of the TDZ lighting (normally 900 m) determines the length of the Obstacle Free Zone (OFZ) established to protect CAT II and III approaches below decision height (DH) and in the event of a baulked landing (or go-around) after DH.	AIXM 5.1 Core		ECAC	
	Slope	Touchdown zone longitudinal slope (slope of 1/3 of the runway length from threshold or first 3000 feet for runways longer than 9000 feet).	AIXM 5.1 Core		ECAC	
Slope		Slope of runway and associated stopways.	AIXM 5.1 Core		ECAC	
LAHSO		Land and Hold Short Operations.				
	Geometry	Geographical location of Land and Hold Short Operations (LAHSO).	AIXM 5.1 Core		ECAC	
	Protected Element	Name of runway or taxiway being protected.	AIXM 5.1 Core		ECAC	
Displaced Area		That portion of a runway between the beginning of the runway and the displaced threshold.				
	Geometry	Geographical location of the displaced area.	AIXM 5.1 Core		ECAC	
	PCN	Pavement classification number of the displaced area.	AIXM 5.1 Core	X	NM Area+ECAC	
	Surface Type	The surface type of the displaced area.	AIXM 5.1 Core		ECAC	
	Aircraft Restriction	Usage restriction for specified aircraft type.	AIXM 5.1 Core		ECAC	
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.				
	Length	The value of the physical length of the stopway.	AIXM 5.1 Core		ECAC	
	Width	The value of the physical width of the stopway.	AIXM 5.1 Core		ECAC	
	Geometry	Geographical location of the stopway.	AIXM 5.1 Core		ECAC	
	Slope	Slope of stopway.	AIXM 5.1 Core		ECAC	
	Surface Type	Surface type of stopway.	AIXM 5.1 Core		ECAC	
Clearway		A defined rectangular area on the ground or water under the control of the appropriate authority, selected or prepared as a suitable area over which an aeroplane may make a portion of its initial climb to a specified height.				
	Length	The longitudinal extent of the clearway.	AIXM 5.1 Core		ECAC	
	Width	The transversal extent of the clearway.	AIXM 5.1 Core		ECAC	
	Ground Profile	The vertical profile (or slope) of the clearway.	AIXM 5.1 Core		ECAC	
RESA		Runway End Safety Area. An area symmetrical about the extended runway centre line and adjacent to the end of the strip primarily intended to reduce the risk of damage to an aeroplane undershooting or overrunning the runway.				
	Length	The longitudinal extent of Runway End Safety Area.	AIXM 5.1 Core		ECAC	
	Width	The transversal extent of the Runway End Safety Area.	AIXM 5.1 Core		ECAC	
	Longitudinal Slope	Longitudinal slope of Runway End Safety Area.	AIXM 5.1 Core		ECAC	
	Transverse Slope	Tranverse slope Runway End Safety Area.	AIXM 5.1 Core		ECAC	
Declared Distance		A conventional operational distance declared for a runway direction. For example, TORA, TODA, etc.				
	TORA	Take-off run available. The length of runway declared available and suitable for the ground run of an airplane taking off.	AIXM 5.1 Core		ECAC+EWD	
	TODA	Take-off distance available. The length of the takeoff run available plus the length of the clearway, if clearway is provided.	AIXM 5.1 Core		ECAC+EWD	

	ASDA	Accelerate-stop distance available. The length of the takeoff run available plus the length of the stopway, if stopway is provided.	AIXM 5.1 Core		ECAC+EWD	
	LDA	Landing distance available. The length of runway that is declared available and suitable for the ground run of an airplane landing.	AIXM 5.1 Core		ECAC+EWD	
	Rejected TODA	Rejected Take-off distance available.	AIXM 5.1 Core		ECAC+EWD	
	Remarks	Remarks including runway entry or start point where alternative reduced declared distances have been declared.	AIXM 5.1 Core		ECAC+EWD	
RWY End Lights		The lighting system provided for a landing and take-off direction, including the stopway lights.				
	Colour	Colour of runway end lights.	AIXM 5.1 Core		ECAC+EWD	
	Position	Geographical location of each individual light of the runway end lights.	AIXM 5.1 Core		ECAC	
	Ground Lighting Availability	An indication of the operational status of the lighting system. The list of values include: "in construction", "operational", "unavailable".	AIXM 5.1 Core		ECAC+EWD	
SWY Lights		The lighting system provided for a landing and take-off direction, including the stopway lights.				
	Length	The longitudinal extent of stopway lights.	AIXM 5.1 Core		ECAC+EWD	
	Colour	Colour of stopway lights.	AIXM 5.1 Core		ECAC+EWD	
	Position	Geographical location of each individual light of the stopway lights.	AIXM 5.1 Core		ECAC	
	Ground Lighting Availability	An indication of the operational status of the lighting system. The list of values include: "in construction", "operational", "unavailable".	AIXM 5.1 Core		ECAC+EWD	
Approach Lighting System		An Aerodrome lighting facility which provides visual guidance to landing aircraft by radiating light beams in a directional pattern by which the pilot aligns the aircraft with the final approach path for landing.				
	Type	Classification of the approach lighting system using as criteria the ICAO Annex 14 standards.	AIXM 5.1 Core		ECAC+EWD	
	Length	The longitudinal extent of approach lighting system.	AIXM 5.1 Core		ECAC+EWD	
	Class ICAO	Classification of the approach lighting system using as criteria the ICAO Annex 14 standards.	AIXM 5.1 Core		ECAC+EWD	
	Position	Geographical location of each individual light of the approach lighting system.	AIXM 5.1 Core		ECAC	
	Ground Lighting Availability	An indication of the operational status of the lighting system. The list of values include: "in construction", "operational", "unavailable".	AIXM 5.1 Core		ECAC+EWD	
Runway Threshold Lights		The lighting system provided for a landing and take-off direction, including the stopway lights.				
	Colour	Colour of runway threshold lights.	AIXM 5.1 Core		ECAC+EWD	
	Wing Bar Colour	Colour of runway threshold wing bars.	AIXM 5.1 Core		ECAC+EWD	
	Position	Geographical location of each individual light of the threshold and wing bar lights.	AIXM 5.1 Core		ECAC	
	Ground Lighting Availability	An indication of the operational status of the lighting system. The list of values include: "in construction", "operational", "unavailable".	AIXM 5.1 Core		ECAC+EWD	
Touchdown Zone Lights		The lighting system provided for a landing and take-off direction, including the stopway lights.				
	Lenght	The longitudinal extent of the runway touchdown zone lights.	AIXM 5.1 Core		ECAC+EWD	
	Position	Geographical location of each individual light of the touchdown zone lights.	AIXM 5.1 Core		ECAC	
Visual Approach Slope Indicator System		A visual guidance system that provides "below/above glidepath" information to an aircraft executing an approach to a specific runway direction.				
	MEHT	The Minimum Eye Height over Threshold (MEHT) value. Also known as the threshold crossing height for the Visual Glide Slope Indicator.	AIXM 5.1 Core		ECAC+EWD	
	Location	Geographical location of Visual approach slope indicator system.	AIXM 5.1 Core		ECAC+EWD	

		Slope Angle	The appropriate approach slope angle to be used by an aircraft using the approach.	AIXM 5.1 Core		ECAC+EWD	
		Type	The type of the visual approach slope indicator system. For example, VASIS, A-VASIS, PAPI, A-PAPI, etc..	AIXM 5.1 Core		ECAC+EWD	
		Displacement Angle	Where the axis of the system is not parallel to the runway centre line, the angle of displacement and the direction of displacement, i.e. left or right.	AIXM 5.1 Core		ECAC+EWD	
		Displacement Direction	Where the axis of the system is not parallel to the runway centre line, the angle of displacement and the direction of displacement, i.e. left or right.	AIXM 5.1 Core		ECAC+EWD	
		Ground Lighting Availability	An indication of the operational status of the lighting system. The list of values include: "in construction", "operational", "unavailable".	AIXM 5.1 Core		ECAC+EWD	
	Arresting Gear		Geographical location of the aresting gear cable across the runway.	AIXM 5.1 Core		ECAC	
	Arresting System		High energy absorbing material located at the end of a runway or stopway designed to crush under the weight of an aircraft as the material exerts deceleration forces on the aircraft landing gear.				
		Length	The longitudinal extent of arresting system.	AIXM 5.1 Core		ECAC	
		Width	The transverse extent of arresting system.	AIXM 5.1 Core		ECAC	
		Setback	Setback of the arresting system.	AIXM 5.1 Core		ECAC	
		Geometry	The geographical location of the arresting system.	AIXM 5.1 Core		ECAC	
	Manoeuvring Area Availability		The operational status of the Runway Direction (operational status, warning, manoeuvring area usage and usage condition).	AIXM 5.1 Core	X	ECAC+EWD	
Seaplane Landing Area			Area specifically designated for take-offs and landings of seaplanes.				
	Ramp Site		Landing area ramp site location (ramp site centreline, elevated surface).	AIXM 5.1 Core		ECAC	
	Dock Site		Seaplane Landing Area dock site.	AIXM 5.1 Core		ECAC	
	Extent		Extent of the seaplane landing area (elevated surface derived from, which extends Surface with properties that represent the vertical position (elevation, datum, accuracy).	AIXM 5.1 Core		ECAC	
	Manoeuvring Area Availability		The operational status of the Seaplane Landing Area (operational status, warning, manoeuvring area usage and usage condition).	AIXM 5.1 Core		ECAC	
Marking Buoy			Floating marker which is moored to the bottom at a specific known location, which is used as an aid to navigation or for other special purpose.				
	Designator		Official number of the buoy.	AIXM 5.1 Core		ECAC	
	Type		The type of the buoy.	AIXM 5.1 Core		ECAC	
	Colour		Colour of the buoy.	AIXM 5.1 Core		ECAC	
	The Seaplane Landing Area		The seaplane landing area which is marked by the buoy.	AIXM 5.1 Core		ECAC	
	Location		Location of the Marking Buoy.	AIXM 5.1 Core		ECAC	
Floating Dock Site			Floating facility which can serve as a mooring place for vessels or as a floating dry dock.				
	Geometry		Geographical location of the floating dock site.	AIXM 5.1 Core		ECAC	
Radio Altimeter Area			A flat surface (at least 300 meters) before the approach-end of the runway that makes sure that the Radio Altimeter gives the pilot a proper height indication.				
	Length		The longitudinal extent of radio altimeter area.	AIXM 5.1 Core		ECAC	
	Width		The transverse extent of radio altimeter area.	AIXM 5.1 Core		ECAC	
	Geometry		Geographical location of radio altimeter area.	AIXM 5.1 Core		ECAC	
Apron / Taxiway							
Apron			A defined area, on a land aerodrome/heliport, intended to accommodate aircraft/helicopters for purposes of loading and unloading passengers, mail or cargo, and for fuelling, parking or maintenance.				

	Name		The full textual name or designator used to identify an apron at an aerodrome/heliport which has more than one.	AIXM 5.1 Core		ECAC	
	Geometry		Geometry of the apron.	AIXM 5.1 Core		ECAC	
	Apron Type		Classification of the primary use for the apron.	AIXM 5.1 Core		ECAC	
	Aircraft Restriction		Usage restriction (prohibition) for specified aircraft type.	AIXM 5.1 Core		ECAC	
	Surface Type		The surface type of the apron.	AIXM 5.1 Core		ECAC	
	Strength		The properties that model characteristics of an apron surface. The surface strength, in character format. For example, 80/R/B/W/T for a PCN type value.				
		PCN	Pavement classification number of apron.	AIXM 5.1 Core	X	NM Area	
		Pavement Type	Pavement type for aircraft classification number - pavement classification number (ACN-PCN) determination.	AIXM 5.1 Core		ECAC	
		Subgrade Category	Subgrade strength category.	AIXM 5.1 Core		ECAC	
		Allowable Pressure	Maximum allowable tire pressure category or maximum allowable tire pressure value.	AIXM 5.1 Core		ECAC	
		Evaluation Method	The evaluation method used to determine the apron strength.	AIXM 5.1 Core		ECAC	
	Elevation		The vertical distance of the position from Mean Sea Level. The geoidal height of the position.	AIXM 5.1 Core		ECAC	
	Apron Markings		A symbol or group of symbols displayed on the surface of the apron.				
		Marking Location	A code indicating the location of the marking relative to the surface.	AIXM 5.1 Core		ECAC	
		Description	Description of Apron markings.	AIXM 5.1 Core		ECAC	
	Apron Light System		The lighting system provided for an apron.				
		Colour	A code indicating the colour of the lights in the group.	AIXM 5.1 Core		ECAC+EWD	
		Intensity	The exact value of the intensity of the lights in the group.	AIXM 5.1 Core		ECAC+EWD	
		Type	A code indicating the type of light source.	AIXM 5.1 Core		ECAC+EWD	
		Position	Geographical location of each individual light of the apron served by the lighting system.	AIXM 5.1 Core		ECAC	
		Ground Lighting Availability	An indication of the operational status of the lighting system. The list of values include: "in construction", "operational", "unavailable".	AIXM 5.1 Core		ECAC+EWD	
	Apron Area Availability		The operational status of the Apron (operational status, warning, apron area usage and usage condition).	AIXM 5.1 Core		ECAC	
Taxiway			A defined path at an aerodrome/heliport established for the taxiing of aircraft/helicopters and intended to provide a link between one part of the aerodrome and another, including aircraft/helicopter stand taxi-lines, apron taxiways, rapid exit taxiways, air taxiways etc.				
	Designator		The textual designator of the taxiway.	AIXM 5.1 Core		ECAC+EWD	
	Width		The transversal extent of the taxiway.	AIXM 5.1 Core		ECAC+EWD	
	Geometry		Geographical location of the taxiway element.	AIXM 5.1 Core		ECAC+EWD	
	Bridge		Type of bridge (none, overpass, underpass).	AIXM 5.1 Core		ECAC+EWD	
	Surface Type		The surface type of the taxiway.	AIXM 5.1 Core		ECAC	
	Strength		The properties that model characteristics of an taxiway surface. The surface strength, in character format. For example, 80/R/B/W/T for a PCN type value.				
		PCN	Pavement classification number of taxiway.	AIXM 5.1 Core	X	NM Area	
		Pavement Type	Pavement type for aircraft classification number - pavement classification number (ACN-PCN) determination.	AIXM 5.1 Core		ECAC	
		Subgrade Category	Subgrade strength category.	AIXM 5.1 Core		ECAC	
		Allowable Pressure	Maximum allowable tire pressure category or maximum allowable tire pressure value.	AIXM 5.1 Core		ECAC	
		Evaluation Method	The evaluation method used to determine the taxiway strength.	AIXM 5.1 Core		ECAC	
	Aircraft Restrictions		Usage restriction for specified aircraft type.	AIXM 5.1 Core		ECAC	
	Reference Code Letter		A letter based on the aeroplane wingspan and outer main gear wheel span.	AIXM 5.1 Core		ECAC	
	Center Line Points		A position on the centre line of a taxiway.				

	Position	A geographic position of the centre line points.	AIXM 5.1 Core		ECAC	
	Elevation	The vertical distance of the position from Mean Sea Level. The geoidal height of the position.	AIXM 5.1 Core		ECAC	
Shoulder		An area adjacent to the edge of a pavement so prepared as to provide a transition between the pavement and the adjacent surface.				
	Geometry	Geographical location of the taxiway shoulder.	AIXM 5.1 Core		ECAC	
	Surface Type	Surface type of taxiway shoulder.	AIXM 5.1 Core		ECAC	
	Width	The value of the physical width of the taxiway shoulder.	AIXM 5.1 Core		ECAC	
Guidance Lines		A line used to guide aircraft on and between Aerodrome movement areas.				
	Geometry	Geoghraphical location of guidance lines.	AIXM 5.1 Core		ECAC	
	Colour	Colour of taxiway guidance lines.	AIXM 5.1 Core		ECAC	
	Style	Style of taxiway guidance lines.	AIXM 5.1 Core		ECAC	
	Wingspan	The distance between the wing tips of the aircraft.	AIXM 5.1 Core		ECAC	
	Maxspeed	Maximum speed on Taxiway.	AIXM 5.1 Core		ECAC	
	Direction	Indicates the direction in which the guidance line can be used with reference to the start and end points of the associated Elevated Curve (An AIXM elevated curve derived from, which extends curve with properties that represent the vertical position (elevation, datum, accuracy).	AIXM 5.1 Core		ECAC	
Intermediate Holding Position Marking Line		Intermediate holding position marking line.	AIXM 5.1 Core		ECAC	
Taxiway Marking		A symbol or group of symbols displayed on the surface of the taxiway.				
	Marking Location	A code indicating the location of the marking relative to the surface.	AIXM 5.1 Core		ECAC	
	Description	Description of the taxiway markings.	AIXM 5.1 Core		ECAC	
Taxiway Edge Lights		Elevated lights that run the length of the taxiway on either side.				
	Description	Description of taxiway edge lights.	AIXM 5.1 Core		ECAC+EWD	
	Position	Geographical location of each individual light of the taxiway edge lights.	AIXM 5.1 Core		ECAC	
	Ground Lighting Availability	An indication of the operational status of the lighting system. The list of values include: "in construction", "operational", "unavailable".	AIXM 5.1 Core		ECAC+EWD	
Taxiway Centre Line Lights		Lights embedded into the surface of the taxiway along the taxiway centerline.				
	Description	Description of taxiway centre line lights.	AIXM 5.1 Core		ECAC+EWD	
	Position	Geographical location of each individual light of the taxiway center line lights.	AIXM 5.1 Core		ECAC	
	Ground Lighting Availability	An indication of the operational status of the lighting system. The list of values include: "in construction", "operational", "unavailable".	AIXM 5.1 Core		ECAC+EWD	
Stop Bars		Stop bars are a series of unidirectional lights at right angles to the taxiway centreline. The lights are spaced three metres apart and located 0.3m before the holding point. Stop bars show red in the direction of approach to the stop bar from the taxiway and are controlled by ATC.				
	Description	Description of the stop bars.	AIXM 5.1 Core		ECAC+EWD	
	Location	Location of the stop bar.	AIXM 5.1 Core		ECAC	
	Ground Lighting Availability	An indication of the operational status of the lighting system. The list of values include: "in construction", "operational", "unavailable".	AIXM 5.1 Core		ECAC+EWD	
Guidance Line Marking		A symbol or group of symbols displayed as the guidance line.				
	Description	Description of the Guidance Line Marking.	AIXM 5.1 Core		ECAC	
Guidance Line Light System		The lighting system for the centreline guidance line.				
	Description	Description of the Guidance Line Light System.	AIXM 5.1 Core		ECAC+EWD	

		Location	Geographical location of each individual light and the stop bar.	AIXM 5.1 Core		ECAC	
		Ground Lighting Availability	An indication of the operational status of the lighting system. The list of values include: "in construction", "operational", "unavailable".	AIXM 5.1 Core		ECAC+EWD	
Taxi Holding Positions			A designated position intended for traffic control at which taxiing aircraft and vehicles shall stop and hold until further cleared to proceed, when so instructed by the aerodrome control tower.				
		Geometry	Geoghraphical location of the Taxi Holding Position.	AIXM 5.1 Core		ECAC	
		protected RWY	Designator of the runway protected.	AIXM 5.1 Core		ECAC	
		Catstop/Landing Category	CAT of runway (0, I, II, III). Type of landing operations for which that holding position is relevant. For example, precision cat I, precision cat II, precision cat III.	AIXM 5.1 Core		ECAC	
		RWY ahead text	Actual text as it exists in the marking. For example, RWY AHEAD or RUNWAY AHEAD.	AIXM 5.1 Core		ECAC	
Taxi Holding Position Marking			A symbol or group of symbols displayed on the surface of a Taxiway indicating the location of the Taxi Holding Position.				
		Description	Description of the Taxi Holding Position Markings.	AIXM 5.1 Core		ECAC	
Taxi Holding Position Light System			Lighting system for a taxiway hold position.				
		Colour	A code indicating the colour of the lights in the group.	AIXM 5.1 Core		ECAC+EWD	
		Intensity	The exact value of the intensity of the lights in the group.	AIXM 5.1 Core		ECAC+EWD	
		Type	A code indicating the type of light source.	AIXM 5.1 Core		ECAC+EWD	
		Position	Geographical location of each individual light of the Taxi Holding Position Light System.	AIXM 5.1 Core		ECAC	
		Ground Lighting Availability	An indication of the operational status of the lighting system. The list of values include: "in construction", "operational", "unavailable".	AIXM 5.1 Core		ECAC+EWD	
Intermediate Holding Position			Geographical location of intermediate holding position - A designated position intended for traffic control at which taxiing aircraft and vehicles shall stop and hold until further cleared to proceed, when so instructed by the aerodrome control tower.	AIXM 5.1 Core		ECAC	
	Manoeuvring Area Availability		The operational status of the Taxiway (operational status, warning, manoeuvring area usage and usage condition).	AIXM 5.1 Core		ECAC+EWD	
Helicopter Ground Taxiway			A ground taxiway intended for the ground movement of wheeled undercarriage helicopters. (Annex 14).				
	Designator		The full textual designator of helicopter ground taxiway.	AIXM 5.1 Core		ECAC	
	Center Line Points		Geographical location of helicopter ground center line taxiway points.	AIXM 5.1 Core		ECAC	
	Elevation		Elevantion of helicopter ground taxiway.	AIXM 5.1 Core		ECAC	
	Width		The transversal extent of the helicopter ground taxiway.	AIXM 5.1 Core		ECAC	
	Surface Type		The surface type of the helicopter ground taxiway.	AIXM 5.1 Core		ECAC	
	Intersection Marking Line		Helicopter ground taxiway intersection marking line.	AIXM 5.1 Core		ECAC	
	Markings		A symbol or group of symbols displayed on the surface of the Helicopter Ground Taxiway.				
		Description	Description of helicopter ground taxiway marking.	AIXM 5.1 Core		ECAC	
	Lightings		Lights embedded into the surface of the Helicopter Ground Taxiway.				
		Description	Description of helicopter ground taxiway light.	AIXM 5.1 Core		ECAC	
		Position	Geographical location of each individual light of the helicopter ground taxiway lights.	AIXM 5.1 Core		ECAC	
Helicopter Air Taxiway			A defined path on the surface established for the air taxiing of helicopters. (Annex 14).				
	Designator		The textual designator of the helicopter air taxiway.	AIXM 5.1 Core		ECAC	
	Center Line Points		Geographical location of helicopter air taxiway center line points.	AIXM 5.1 Core		ECAC	
	Elevation		Elevation of helicopter air taxiway.	AIXM 5.1 Core		ECAC	
	Width		The transversal extent of the helicopter air taxiway.	AIXM 5.1 Core		ECAC	

	Surface Type		The surface type of the helicopter air taxiway.	AIXM 5.1 Core		ECAC	
	Helicopter Air Taxiway Marking		A symbol or group of symbols displayed on the surface of the helicopter air taxiway.				
		Description	Description of helicopter air taxiway marking.	AIXM 5.1 Core		ECAC	
	Helicopter Air Taxiway Lighting		Helicopter air taxiway edge and centre line lights.				
		Description	Description of helicopter air taxiway lighting.	AIXM 5.1 Core		ECAC	
		Position	Geographical location of each individual light of the helicopter air taxiway lights.	AIXM 5.1 Core		ECAC	
Helicopter Air Transit Routes			A defined path established for the movement of helicopters from one part of a heliport to another. A taxi-route includes a helicopter air or ground taxiway which is centred on the taxi-route.				
	Designator		Designator of helicopter air transit route.	AIXM 5.1 Core		ECAC	
	Geometry		Geographical location of helicopter air transit route.	AIXM 5.1 Core		ECAC	
	Width		The transversal extent of the helicopter air transit route.	AIXM 5.1 Core		ECAC	
Navigation System Checkpoint			A point established and marked on the surface of an aerodrome allowing the checking of a navigation system (like VOR, GNSS, etc.) or initialisation of an inertial navigation system.				
	Category		Indicates the position of the checkpoint; airborne or ground.	AIXM 5.1 Core		ECAC	
	Upper Limit		Indicating the upper limit of the block in which the check should be conducted.	AIXM 5.1 Core		ECAC	
	Lower Limit		Indicating the lower limit of the block in which the check should be conducted.	AIXM 5.1 Core		ECAC	
	Altitude Interpretation		Indicates how the upper and/or lower altitude values should be interpreted.	AIXM 5.1 Core		ECAC	
	Distance		The value of the distance from the checkpoint to the navaid.	AIXM 5.1 Core		ECAC	
	Angle		The indication of a bearing (at a given point) by the measurement of the angle between the checkpoint and the navaid equipment (VOR).	AIXM 5.1 Core		ECAC	
	Position		The position of the check point.	AIXM 5.1 Core		ECAC	
Aircraft Gate/Stand			A designated area on an apron intended to be used for parking an aircraft.				
	Name		The full textual name or designator used to identify a aircraft gate/stand at an aerodrome/heliport.	AIXM 5.1 Core		ECAC+EWD	
	Aircraft Stand Points		An AIXM Point derived from GM_Point that includes properties for describing a point with elevation and vertical extent. Used in obstacles, navaids, etc.				
		Location	Geographical location of aircraft stand point.	AIXM 5.1 Core		ECAC+EWD	
		Aircraft Types	Aircraft types.	AIXM 5.1 Core		ECAC	
	Identification Sign		A code identifying the characteristics of a gate/stand. Examples: parking position on the apron, isolated aircraft stand, terminal building gate.	AIXM 5.1 Core		ECAC+EWD	
	Visual Docking Parking Guidance System		A device used at the aircraft gates/stands in order to help the pilot align and position the aircraft.	AIXM 5.1 Core		ECAC	
	Parking Stand Area		Geographical location of parking stand area.	AIXM 5.1 Core		ECAC	
	Jetway		Jetway available at aircraft stand.	AIXM 5.1 Core		ECAC	
	Fuel		Fuel available at aircraft stand.	AIXM 5.1 Core		ECAC	
	Ground Power		Availability of ground power.	AIXM 5.1 Core		ECAC	
	Towing		Availability of towing service.	AIXM 5.1 Core		ECAC	
	Terminal		Terminal Building reference.	AIXM 5.1 Core		ECAC	
	Surface Type		The surface type of the aircraft gate/stand.	AIXM 5.1 Core		ECAC	
	Aircraft Restriction		Usage restriction (prohibition) for specified aircraft type.	AIXM 5.1 Core		ECAC	
	PCN		Pavement classification number.	AIXM 5.1 Core	X	NM Area	
	Gate/Stand Marking		A symbol or group of symbols displayed on the surface of the Aircraft Stand.				
		Description	Description of the Aircraft Gate/Stand markings.	AIXM 5.1 Core		ECAC	
	Stand Guidance Line		A line used to guide aircraft on and between Aerodrome movement areas.				

		Geometry	Geographical location of stand guidance line.	AIXM 5.1 Core		ECAC	
		Elevation	Parking guidance line points elevation.	AIXM 5.1 Core		ECAC	
		Direction	Direction of stand guidance line.	AIXM 5.1 Core		ECAC	
		Wingspan	The distance between the wing tips of the aircraft.	AIXM 5.1 Core		ECAC	
		Colour	The colour of the marking.	AIXM 5.1 Core		ECAC	
		Style	The style of the marking line e.g. continuous, dotted, etc.	AIXM 5.1 Core		ECAC	
	Availability		The operational status of the Aircraft Gate/Stand (operational status, warning, apron area usage and usage condition).	AIXM 5.1 Core		ECAC+EWD	
Helicopter Stand			An aircraft stand which provides for parking a helicopter and where ground taxi operations are completed or where the helicopter touches down and lifts off for air taxi operations. (Annex 14).				
	Name		Name of helicopter stand.	AIXM 5.1 Core		ECAC	
	Location		Geographical location of helicopter stand point/ INS checkpoints.	AIXM 5.1 Core		ECAC	
Passenger Loading Bridge			Bridge for loading/unloading access to airplanes for passengers and crew.				
	Type		Type of bridge used passengers to board and deplane.	AIXM 5.1 Core		ECAC	
	Elevated Surface		An AIXM elevated surface derived from, which extends Surface with properties that represent the vertical position (elevation, datum, accuracy).				
		Elevation	The vertical distance of the surface level measured from Mean Sea Level (MSL).	AIXM 5.1 Core		ECAC	
		Geoid Undulation	The distance of the geoid above (positive) or below (negative) the mathematical reference ellipsoid at the location of the surface.	AIXM 5.1 Core		ECAC	
	Associated Stand		The gate/stand associated with the pass. loading bridge.	AIXM 5.1 Core		ECAC	
Deicing Area			A facility where frost, ice or snow is removed (de-icing) from the aeroplane to provide clean surfaces, and/or where clean surfaces of the aeroplane receive protection (anti-icing) against the formation of frost or ice and accumulation of snow or slush for a limited period of time.				
	Identifier		Identifier of de-icing area.	AIXM 5.1 Core		ECAC	
	Geometry		Geographical location of de-icing area.	AIXM 5.1 Core		ECAC	
	Surface Type		The surface characteristics of the deicing area.	AIXM 5.1 Core		ECAC	
	ID Base		Name of underlying Taxiway, Parking, Stand or Apron Element.	AIXM 5.1 Core		ECAC	
	Aircraft Restriction		Usage restriction (prohibition) for specified aircraft type.	AIXM 5.1 Core		ECAC	
	Deicing Area Marking		A symbol or group of symbols displayed on the surface of a Deicing Area.				
		Description	Description of the Deicing Area markings.	AIXM 5.1 Core		ECAC	
	Availability		The operational status of the Deicing Area (operational status, warning, apron area usage and usage condition).	AIXM 5.1 Core		ECAC	
FATO / TLOF							
Final Approach and Take-Off Area			Final approach and take-off area. A defined area over which the final phase of the approach manoeuvre to hover or landing is completed and from which the take-off manoeuvre is commenced. Where the FATO is to be used by helicopters operated in performance class 1, the defined area includes the rejected take-off area available.				
	Threshold Point		The FATO/runway thresholds are markings across the RWY that denote the beginning and end of the designated space for landing and takeoff under non-emergency conditions.				
		Position	A geographic position of the final approach and take-off area.	AIXM 5.1 Core	X	ECAC+EWD	
		Elevation	The value of the vertical distance of the aiming point from Mean Sea Level. The geoidal height of the position.	AIXM 5.1 Core	X	ECAC+EWD	
		Geoid Undulation	The value of the distance separating the geoid and the ellipsoid at that position. In respect of WGS-84 geodetic datum, the difference between the WGS-84 ellipsoidal height and geoidal height represents the geoidal undulation.	AIXM 5.1 Core		ECAC	

Departure End of Runway		Departure end of the runway (DER), which is the end of the area declared suitable for take-off (i.e. the end of the runway or, where a clearway is provided, the end of the clearway or the end of the final approach and take-off (FATO) area).				
	Position	Geographical location of DER.	AIXM 5.1 Core	X	ECAC+EWD	
	Elevation	The elevation of the DER is the higher of the elevations of the beginning and end of the runway/FATO.	AIXM 5.1 Core	X	ECAC+EWD	
Type		Type of FATO according to ICAO Heliport Manual (Doc 9261).	AIXM 5.1 Core	X	ECAC	
Designation		The full textual designator of the final approach and take-off area, used to uniquely identify it at an aerodrome/heliport which has more than one. For ex. 09/27, 02R/20L, etc.	AIXM 5.1 Core	X	World Wide	
Geometry		Geographical location of FATO element.	AIXM 5.1 Core		ECAC	
Length		The longitudinal extent of FATO.	AIXM 5.1 Core	X	ECAC+EWD	
Width		The transversal extent of FATO.	AIXM 5.1 Core	X	ECAC+EWD	
Slope		Final approach and take-off area slope.	AIXM 5.1 Core		ECAC	
Surface Type		Surface type of FATO.	AIXM 5.1 Core	X	ECAC	
True Bearing		The value of the true bearing.	AIXM 5.1 Core	X	ECAC	
Declared Distance		A conventional distance declared for a FATO direction. For example, TODAH, LDAH, etc.				
	TODAH	Take-off distance available - The length of the FATO plus the length of helicopter clearway (if provided).	AIXM 5.1 Core		ECAC+EWD	
	RTODAH	Rejected Take-off distance available - The length of the FATO declared available and suitable for helicopters operated in performance class 1 to complete a rejected take-off.	AIXM 5.1 Core		ECAC+EWD	
	LDAH	Landing distance available - The length of the FATO plus any additional area declared available and suitable for helicopters to complete the landing manoeuvre from a defined height.	AIXM 5.1 Core		ECAC+EWD	
	Remarks	Remarks including entry or start point where alternative reduced declared distances have been declared.	AIXM 5.1 Core		ECAC+EWD	
FATO Marking		A symbol or group of symbols displayed on the surface of the final approach and take-off area.				
	Marking Location	A code indicating the location of the marking relative to the surface.	AIXM 5.1 Core		ECAC	
	Description	Description of FATO markings.	AIXM 5.1 Core		ECAC	
Approach Lighting System		An Aerodrome lighting facility which provides visual guidance to landing aircraft by radiating light beams in a directional pattern by which the pilot aligns the aircraft with the final approach path for landing.				
	Type	Classification of the approach lighting system using as criteria the ICAO Annex 14 standards.	AIXM 5.1 Core		ECAC+EWD	
	Length	The longitudinal extent of approach lighting system.	AIXM 5.1 Core		ECAC+EWD	
	Intensity	The relative intensity of the lighting system.	AIXM 5.1 Core		ECAC+EWD	
	Position	Geographical location of each individual light of the approach lighting system.	AIXM 5.1 Core		ECAC	
	Ground Lighting Availability	An indication of the operational status of the lighting system. The list of values include: "in construction", "operational", "unavailable".	AIXM 5.1 Core		ECAC+EWD	
Area Lights		To be placed along the edges of the FATO (Final approach and take-off area).				
	Description	Description of area lights.	AIXM 5.1 Core		ECAC+EWD	
	Position	Geographical location of each individual light of the area lights.	AIXM 5.1 Core		ECAC	
	Ground Lighting Availability	An indication of the operational status of the lighting system. The list of values include: "in construction", "operational", "unavailable".	AIXM 5.1 Core		ECAC+EWD	
Aiming Point Lights		For approaching a particular point before proceeding to TLOF.				
	Description	Description of aiming point lights.	AIXM 5.1 Core		ECAC+EWD	

		Position	Geographical location of each individual light of the aiming point lights.	AIXM 5.1 Core		ECAC	
		Ground Lighting Availability	An indication of the operational status of the lighting system. The list of values include: "in construction", "operational", "unavailable".	AIXM 5.1 Core		ECAC+EWD	
	Manoeuvring Area Availability		The operational status of the Final Approach and Take-Off Area (operational status, warning, manoeuvring area usage and usage condition).	AIXM 5.1 Core	X	ECAC+EWD	
Touchdown and Lift-Off Area			Touchdown and lift-off area. An area on which a helicopter may touch down or lift off.				
	Designator		The textual designator of the touch down and lift-off area.	AIXM 5.1 Core	X	ECAC	
	Center Point		The profile of the centre line of the runway (including beginning and End of the centerline / the elevation of the runway centre line at each end of the runway, at the stopway, at the origin of each take-off and approach area, and at each significant change of slope of runway and stopway.				
		Position	A geographic position of the touchdown and lift-off area.	AIXM 5.1 Core	X	ECAC	
		Elevation	The value of the vertical distance of the aiming point from Mean Sea Level. The geoidal height of the position.	AIXM 5.1 Core	X	ECAC	
		Geoid Undulation	The value of the distance separating the geoid and the ellipsoid at that position. In respect of WGS-84 geodetic datum, the difference between the WGS-84 ellipsoidal height and geoidal height represents the geoidal undulation.	AIXM 5.1 Core		ECAC	
	Length		The longitudinal extent of TLOF.	AIXM 5.1 Core	X	ECAC	
	Width		The transversal extent of TLOF.	AIXM 5.1 Core	X	ECAC	
	Geometry		Geographical location of TLOF element.	AIXM 5.1 Core		ECAC	
	Surface Type		Surface characteristics of the touch down lift off zone.	AIXM 5.1 Core	X	ECAC	
	Slope		The slope (rate of upward inclination of the surface from the horizontal) of the surface of a feature.	AIXM 5.1 Core		ECAC	
	Bearing Strength		The bearing strength of TLOF.	AIXM 5.1 Core		ECAC	
	Visual Approach Slope Indicator System Type		Type of visual approach slope indicator system.	AIXM 5.1 Core		ECAC	
	Helicopter Class		The class of a helicopter based on its performance during a critical power unit failure after take-off (Helicopter class 1/2/3/Other).	AIXM 5.1 Core		ECAC	
	Touch Down Lift Off Marking		A symbol or group of symbols displayed on the surface of the touch down and lift-off area.				
		Marking Location	A code indicating the location of the marking relative to the surface.	AIXM 5.1 Core		ECAC	
		Description	Description of TLOF markings.	AIXM 5.1 Core		ECAC	
	Touch Down Lift Off Light System		The lighting system provided for a TLOF surface at an Aerodrome/Heliport.				
		Colour	A code indicating the colour of the lights in the group.	AIXM 5.1 Core		ECAC	
		Intensity	The exact value of the intensity of the lights in the group.	AIXM 5.1 Core		ECAC	
		Type	A code indicating the type of light source.	AIXM 5.1 Core		ECAC	
		Position	Geographical location of each individual light of the touch down lighting system.	AIXM 5.1 Core		ECAC	
		Ground Lighting Availability	An indication of the operational status of the lighting system. The list of values include: "in construction", "operational", "unavailable".	AIXM 5.1 Core		ECAC	
	Manoeuvring Area Availability		The operational status of the Touchdown and Lift-Off Area (operational status, warning, manoeuvring area usage and usage condition).	AIXM 5.1 Core	X	ECAC	
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.				
	Length		The longitudinal extent of safety area.	AIXM 5.1 Core		ECAC	
	Width		The transversal extent of safety area.	AIXM 5.1 Core		ECAC	

	Surface Type		The surface characteristics of the Aerodrome/Heliport Protection Area (An area situated in the vicinity of a runway, FATO or TLOF, provided to protect aircraft during manoeuvring, take-off and/or landing operations).	AIXM 5.1 Core		ECAC	
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.				
	Length		The longitudinal extent of the helicopter clearway.	AIXM 5.1 Core		ECAC	
	Width		The transversal extent of the helicopter clearway.	AIXM 5.1 Core		ECAC	
	Ground Profile		Vertical profile (or slope) of helicopter clearway.	AIXM 5.1 Core		ECAC	
Surface Contamination							
Surface Contamination (Airport/Heliport, Apron, TLOF, Aircraft Stand, etc.)			The presence or removal of hazardous conditions due to snow, ice, slush, water, etc. on the Airport/Heliport, Apron, TLOF, Aircraft Stand surfaces.				
	Observation Time		The date and time of the measurement completion (UTC).	AIXM 5.1 Core		World Wide	
	Depth		The depth of the contamination on the surface.	AIXM 5.1 Core		World Wide	
	Friction Coefficient		The average friction coefficient.	AIXM 5.1 Core		World Wide	
	Friction Estimation		A qualitative estimate of the friction.	AIXM 5.1 Core		World Wide	
	Friction Device		The type of equipment used to determine the reported friction coefficient.	AIXM 5.1 Core		World Wide	
	Obscured Lights		Indicates that the surface lights are obscured.	AIXM 5.1 Core		World Wide	
	Further Clearance Time		The date and time (UTC) when it is expected to complete further clearance.	AIXM 5.1 Core		World Wide	
	Further Total Clearance		Indicates that the further total clearance is expected.	AIXM 5.1 Core		World Wide	
	Next Observation Time		The date and time of the next intended measurement report (UTC).	AIXM 5.1 Core		World Wide	
	Proportion		The percentage of the contaminated area from the overall extent of the surface.	AIXM 5.1 Core		World Wide	
	Critical Ridge		A ridge or bank of contaminant that might affect operations. For example a snowbank.	AIXM 5.1 Core		World Wide	
	Layer		A layer of contaminant. An operationally significant contaminant of homogeneous type such as snow, ice, slush, water, sand, etc., which is present on a large surface of the airport/heliport area.	AIXM 5.1 Core		World Wide	
	Runway Contamination		The presence or removal of hazardous conditions due to snow, ice, slush, water, etc. on the runway surface.				
		Surface Contamination	Presence or removal of hazardous conditions on movement areas due to snow, ice, slush, water.	AIXM 5.1 Core		World Wide	
		Cleared Length	Length of runway cleared of contamination, if less than the total length.	AIXM 5.1 Core		World Wide	
		Cleared Width	Width of runway cleared of contamination, if less than the total width.	AIXM 5.1 Core		World Wide	
		Cleared Side	Indicates that the cleared width is offset left or right of centre line.	AIXM 5.1 Core		World Wide	
		Further Clearance Length	Length of runway that is expected to be cleared of contamination, if less than the total length.	AIXM 5.1 Core		World Wide	
		Further Clearance Width	Width of runway that is expected to be cleared of contamination, if less than the total width.	AIXM 5.1 Core		World Wide	
		Obscured Light Side	Indicates the side on which the lights are obscured.	AIXM 5.1 Core		World Wide	
		Cleared Length Begin	The distance from the threshold with the lowest designator number to the point where the cleared portion starts, in case of partial clearance.	AIXM 5.1 Core		World Wide	
	Runway Section Contamination		The presence or removal of hazardous conditions due to snow, ice, water, etc. on a section of the runway surface.				

		Section	Indicates the part of the runway that is affected. This attribute supports the current SNOWTAM practice, which consists in reporting the contamination information on each third of the runway length, starting from the threshold of the runway direction having the lower designation number.	AIXM 5.1 Core		World Wide	
	Taxiway Contamination		The presence or removal of hazardous conditions due to snow, ice, slush, water, etc. on the taxiway surface.				
		Cleared Width	Width of taxiway cleared of contamination.	AIXM 5.1 Core		World Wide	

Subject	Property	Sub-Property	Description	Modelling Reference	Annex 15 IOP Data	Minimum Geographical Coverage	Remark
AIRSPACE							
Airspace							
ATS Airspace			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.				
	Type		Type of ATS airspace according to ICAO Annex 11 (FIR, UIR, TMA, CTR, CTA, Other), Oceanic Transition Area (OTA), other.	AIXM 5.1 Core	X	See Note: Geographical Coverage Per Airspace Type	
	Designation		The designator given to an airspace by a responsible authority.	AIXM 5.1 Core	X		
	Vertical Limits		Vertical Limits of the Airspace.				
		Upper Limit	The Upper Limit of the Airspace.	AIXM 5.1 Core	X		
		Lower Limit	The Lower Limit of the Airspace.	AIXM 5.1 Core	X		
	Lateral Limits		The surface defining the horizontal shape of the Airspace.	AIXM 5.1 Core	X		
	Class of Airspace		A block of airspace with a specific class. A categorisation of airspace which determines the operating rules, flight requirements, and services provided. According to Annex 11, Appendix 4.	AIXM 5.1 Core	X	ECAC	
	Transition Altitude		The altitude at or below which the vertical position of an aircraft is controlled by reference to altitudes.	AIXM 5.1 Core	X	ECAC	
	Control Type		The primary organization type in terms of civil or military, providing air traffic services within a designated airspace.	AIXM 5.1 Core	X	NM Area+ECAC	
	Authority For Airspace		The responsibility that one organisation has for an airspace. Description: For example, this entity will indicate which State is de jure and which State is de facto responsible for the airspace.				
		Type	A categorisation of the role that one organisation has for an airspace. Description: For example, the airspace is under the jurisdiction of Organisation/Authority, the airspace is delegated to the Organisation/ Authority for the provision of air traffic services.	AIXM 5.1 Core	X	ECAC	
	ATS Unit		Unit providing service.				
		Name	The name of the unit providing the service.	AIXM 5.1 Core	X	NM Area+ECAC	
		Call Sign	The call sign of the aeronautical station serving the unit.	AIXM 5.1 Core	X	ECAC	
		Language	Language(s) used, specifying area and conditions, when and where to be used, if applicable.	AIXM 5.1 Core	X	NM Area+ECAC	
		Applicability	Information on the area and conditions when to be used.	AIXM 5.1 Core		NM Area+ECAC	
		Hours of Service	Operational hours of the station serving the unit.	AIXM 5.1 Core	X	NM Area+ECAC	
	Frequency		Value and purpose of the ATS frequency.				
		Value	The frequency of the ATS aispace.	AIXM 5.1 Core	X	NM Area+ECAC	
		Purpose	Indications for specific purposes of the frequency.	AIXM 5.1 Core		ECAC	
	Airspace Activation		The operational status of the ATS Airspace (activity, status, levels, user, aircraft).	AIXM 5.1 Core+ ADR Extension	X	ECAC+EWD	
Special Activity Airspace (Manageable/Restricted Airspace)			Special Activity Airspace (Manageable/Restricted Airspace) represent a part of the Airspace where General Air Traffic (GAT) can be restricted. In practice, it corresponds in most cases with airspace where military operations may take place.				
	Type		Danger Area, Restricted Area, Prohibited Area, Temporary Reserved Area, Temporary Segregated Area, Restricted Coordination Area, Military Reserved Area, Military Training Area, Cross Border Area, Air Defence Identification Zone (ADIZ), Other.	AIXM 5.1 Core	X	See Note: Geographical Coverage Per Airspace Type	
	Identification		The identification assigned to uniquely identify the airspace.	AIXM 5.1 Core	X		
	Name		The name given to the Area by a responsible authority.	AIXM 5.1 Core	X		
	Vertical Limits		Vertical Limits of the Airspace.				

	Upper Limit	The Upper Limit of the Airspace.	AIXM 5.1 Core	X		
	Lower Limit	The Lower Limit of the Airspace.	AIXM 5.1 Core	X		
Lateral Limits		The surface defining the horizontal shape of the Airspace.	AIXM 5.1 Core	X		
Restriction		Type of restriction or nature of hazard.	AIXM 5.1 Core	X	NM Area+ECAC	
Activation		Information on system and means of activation announcements together with information pertinent to civil flights and applicable ADIZ procedures.	AIXM 5.1 Core+ ADR Extension	X	Upper Airspace >> World-Wide Lower Airspace >> ECAC+EWD	
Time of activity		Time interval when the special activity takes place.	AIXM 5.1 Core	X	NM Area+ECAC	
Risk of Interception		Risk of interception in the event of penetration.	AIXM 5.1 Core	X	NM Area+ECAC	
Aerial Sporting Activities Airspace		Airspace with intensive aerial sporting and recreational activities				
Type of activity		Type of aerial sporting or recreational activity.	AIXM 5.1 Core	X	ECAC	
Designator		The designation of the airspace.	AIXM 5.1 Core	X	ECAC	
Vertical Limits		Vertical Limits of the Airspace.				
	Upper Limit	The Upper Limit of the Airspace.	AIXM 5.1 Core	X	ECAC	
	Lower Limit	The Lower Limit of the Airspace.	AIXM 5.1 Core	X	ECAC	
Lateral Limits		The surface defining the horizontal shape of the Airspace.	AIXM 5.1 Core	X	ECAC	
Time of activity		Time interval when the activity takes place.	AIXM 5.1 Core	X	ECAC	
Risk of Interception		Contact details (Tel. Nr. or Frequency) of operator / user.	AIXM 5.1 Core	X	ECAC	
Other Regulated Airspace		Other regulated Airspace e.g. Free Route Airspace, RVSM, ELT, etc.				
Type		Type of airspace (RVSM, ELT etc.).	AIXM 5.1 Core	X	ECAC	
Identification		The identification assigned to uniquely identify the airspace.	AIXM 5.1 Core	X	ECAC	
Name		The name given to the airspace by a responsible authority.	AIXM 5.1 Core	X	ECAC	
Vertical Limits		Vertical Limits of the Airspace.				
	Upper Limit	The Upper Limit of the Airspace.	AIXM 5.1 Core	X	ECAC	
	Lower Limit	The Lower Limit of the Airspace.	AIXM 5.1 Core	X	ECAC	
Lateral Limits		The surface defining the horizontal shape of the Airspace.	AIXM 5.1 Core	X	ECAC	
Restriction		Type of restriction if any.	AIXM 5.1 Core	X	ECAC	
Activation		Information on system and means of activation announcements together with information pertinent to civil flights and applicable ADIZ procedures.	AIXM 5.1 Core+ ADR Extension	X	Upper Airspace >> World-Wide Lower Airspace >> ECAC+EWD	
Time of activity		Time interval when the special activity takes place.	AIXM 5.1 Core	X	ECAC	
ATS Control Sector		A subdivision of a designated control area within which responsibility is assigned to one controller or to a small group of controllers.				
Identification		The identification given to the sector.	AIXM 5.1 Core	X	See Note: Geographical Coverage Per Airspace Type	
Vertical Limits		Vertical Limits of the Airspace.				
	Upper Limit	The Upper Limit of the Airspace.	AIXM 5.1 Core	X		
	Lower Limit	The Lower Limit of the Airspace.	AIXM 5.1 Core	X		
Lateral Limits		The surface defining the horizontal shape of the ATC-sector.	AIXM 5.1 Core	X		
Geo Border		A physical or political border. In general, it will be the border between two countries or States but could also be a coastline, the description of the bank of an important river, or any other geographical shape which can be named and used to describe the border of an airspace. If two countries/States have more than one common border, each one will be an occurrence of this entity.				
Name		The name of the common border. If the two countries (States) have more than one common border, each one will have a different name. For example, France-Germany, France-Switzerland, Croatia-Serbia-north, Croatia-Serbia-south, etc.	AIXM 5.1 Core	X	World Wide	
Type		A code indicating the type of geographical border. The most common situation is the political boundary between two countries.	AIXM 5.1 Core	X	World Wide	
Airspace Areas or Special Zones for UA (Unmanned Aircraft) Operations						

Specified Reserved Areas			Specified reserved areas are UA prohibited, restricted areas and special zones for UA operations.				*Unmanned Aircraft Systems (UAS) are an aircraft and its associated elements which are operated with no pilot on board. Remotely Piloted Aircraft Systems (RPAS) are a set of configurable elements consisting of a remotely piloted aircraft, its associated remote pilot station(s), the required command and control links and any other system elements as may be required. The Drone term is used to speak of UAS and RPAS.*
	UA Prohibited Areas		Airspace of defined dimensions, above the land areas or territorial waters of a State, where UA operations are not permitted without prior authorisation or are not permitted at all.	AIXM 5.1 Core		ECAC	
	UA Restricted Areas		Airspace of defined dimensions, above the land areas or territorial waters of a State, where UA shall comply with defined technical or performance specifications, including mandatory equipment or functions that enable easy identification or automatically limit the airspace they can enter.	AIXM 5.1 Core		ECAC	
	UA Special Zones		Special Zones, where UA operations shall comply with specified environmental standards e.g. circular zones with the corresponding radius around the: Hospitals; Schools; Power Plants, Military Bases; Federal Prisons, National Parks; Stadiums, Courthouses; etc.	AIXM 5.1 Core		ECAC	

Note: Minimum Geographical Coverage for Per Airspace Type

Airspace Type	Minimum Geographical Coverage
UIR (Upper Flight Information Region)	World Wide
UIR-P (Part of a UIR)	World Wide
FIR (Flight Information Region)	World Wide
FIR-P (Part of an FIR)	World Wide
NAS (National Airspace System)	World Wide
NAS-P (Part of a NAS)	World Wide
OCA (Oceanic Control Area)	World Wide
OCA-P (Part of OCA)	World Wide
P (Prohibited Area)	World Wide
D (Danger Area)	World Wide
R (Restricted Area)	World Wide
TMA (Terminal Control Area)	World Wide
TMA-P (Part of TMA)	World Wide
PART (Part of an airspace (used in airspace association of type BOM))	World Wide
CBA (Cross Border Area (FUA))	ECAC Area
D-AMC (AMC Manageable Danger Area)	ECAC Area
R-AMC (AMC Manageable Restricted Area)	ECAC Area
RCA (Reduced Co-ordination Area (FUA))	ECAC Area
TRA (Temporary Reserved Area (FUA))	ECAC Area
TSA (Temporary Segregated Area (FUA))	ECAC Area
RAS (Regulated Airspace)	ECAC Area
CTR (Control area)	ENV_EXTR + ECAC Area + EWD
CTR-P (Part of CTR)	NM + ECAC Area + EWD
ATZ (Airport Traffic Zone)	ENV_EXTR + ECAC Area + EWD
CTA (Control Area)	ENV_EXTR + ECAC+ Area + EWD
CTA-P (Part of a CTA)	NM + ECAC+ Area + EWD
UTA (Upper Control Area)	ENV_EXTR + ECAC+ Area
UTA-P (Part of a UTA)	NM + ECAC+ Area

SECTOR (Control Sector)	NM Area
SECTOR-C (Temporarily Consolidated (Collapsed) Sector)	NM Area
OTHER	

Subject	Property	Sub-Property	Description	Modelling Reference	Annex 15 IOP Data	Minimum Geographical Coverage	Remark
ROUTE							
Route							
ATS Route			A specified ATS route designed for channelling the flow of traffic as necessary for the provision of air traffic services, from the end of the take-off and initial climb phase to the commencement of the approach and landing phase.				
	Designator		Designators for ATS routes according to Annex 11 Appendix 1 (or Appendix 3 for standard departure and arrival routes).	AIXM 5.1 Core	X	World Wide	
	Designator Prefix		A prefix for the route designator (upper, Helicopter, etc.).	AIXM 5.1 Core	X	World Wide	
	Flight Rules		The flight rules to be observed by aircraft. For example, VFR and/or IFR.	AIXM 5.1 Core	X	ENV_EXTR+ ECAC	
	International Use		A code indicating if the route segment is international or domestic.	AIXM 5.1 Core	X	ENV_EXTR+ ECAC	
Military Route			A specified MIL route designed for channelling the flow of traffic as necessary for the provision of air traffic services, from the end of the take-off and initial climb phase to the commencement of the approach and landing phase.				
	Designator		Designators for MIL routes.	AIXM 5.1 Core	X	World Wide	
	Designator Prefix		A prefix for the route designator: Note: Includes a non-ICAO value, used for military TACAN routes.	AIXM 5.1 Core	X	ENV_EXTR+ ECAC	
	Flight Rules		The flight rules to be observed by aircraft. For example, VFR and/or IFR.	AIXM 5.1 Core	X	ENV_EXTR+ ECAC	
	Military Training Type		A code indicating the type of military training activity for which the route has been designed (IFR Training route, VFR Training Route, Slow Speed Low Altitude Training Route, Other).	AIXM 5.1 Core		ECAC	
	User Organisation		Indicates the Organisation normally originating activity on a military training route.	AIXM 5.1 Core		ECAC	
OTS Track			OTS Routes are routes defined in the Organised Track System. North Atlantic Tracks (NAT) - transatlantic flight routes that stretch from the northeast of North America to western Europe across the Atlantic Ocean.				*Any NOTAMs pertaining to the active North Atlantic Tracks (waypoint changes, procedures) will be found by searching the ARTCC NOTAMs under Shanwick Center (EGGX), Gander Center (CZQX), Boston Center (KZBW) and New York Center (KZNY).*
	Designator		Designators for Oceanic Track (Organized Track System).	AIXM 5.1 Core	X	World Wide	
	Flight Rules		The flight rules to be observed by aircraft. For example, VFR and/or IFR.	AIXM 5.1 Core	X	ENV_EXTR+ ECAC	
Route DME			DME facilities that are used for a particular route for DME/DME navigation.				
	Critical DME		An indication that the DME is critical for navigation on the route portion.	AIXM 5.1 Core		ECAC	
	Satisfactory		Specifies whether the critical DME passed satisfactory or unsatisfactory.	AIXM 5.1 Core		ECAC	
	Referenced DME		The DME referenced on the Route.	AIXM 5.1 Core		ECAC	
	Applicable Route Portion		The route portion that the Route DME applies to.	AIXM 5.1 Core		ECAC	
Aerial Refuelling			A procedure used by the military to transfer fuel from one aircraft to another during flight.				
	Designator Prefix		A group of characters that indicate that the designator is for an aerial refuelling route.	AIXM 5.1 Core		ECAC	
	Designator Number		A number that identifies the Aerial Refuelling route.	AIXM 5.1 Core		ECAC	
	Designator Suffix		A group of characters that qualifies the Aerial Refuelling route.	AIXM 5.1 Core		ECAC	
	Designator Direction		The general cardinal direction of the Aerial Refuelling procedure, as a category.	AIXM 5.1 Core		ECAC	

	Name		A free text identifier by which the Aerial Refuelling route is known.	AIXM 5.1 Core		ECAC	
	Type		The type of the Aerial Refuelling procedure based on its configuration.	AIXM 5.1 Core		ECAC	
	Tanker Channel		A code indicating the tanker channel of the TACAN system.	AIXM 5.1 Core		ECAC	
	Receiver Channel		The Tactical Air Navigation System (TACAN) channel assigned to the aircraft receiving fuel during air Refuel operations.	AIXM 5.1 Core		ECAC	
	Route Availability		The operational availability of the Aerial Refuelling.	AIXM 5.1 Core		ECAC	
Route Segment			A portion of a route to be flown usually without an intermediate stop, as defined by two consecutive significant points.				
	Navigation Specification		Designation of the navigation specification(s) applicable to a specified segment(s) - 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.	AIXM 5.1 Core	X	ECAC	
	From Point		Reference to the first point of a route segment.				
		Name	The coded designators or name-codes of significant point.	AIXM 5.1 Core	X	World Wide	
		Reporting	Indication of ATS / MET reporting requirement “compulsory” or“on-request”.	AIXM 5.1 Core	X	World Wide	
	To Point		Reference to the second point of a route segment.				
		Name	The coded designators or name-codes of significant point.	AIXM 5.1 Core	X	World Wide	
		Reporting	Indication of the ATS / MET reporting requirement “compulsory” or “on-request”.	AIXM 5.1 Core	X	World Wide	
	Track		Tracks or VOR radials bearing (for PBN routes). The value of a bearing indication (at a given point) measured as the angle between the bearing and either True North or Magnetic North (this should appear explicitly or implicitly). The angle is measured clockwise from 0 degrees up to and including 360 degrees. The value can also be a VOR radial. For example, Westward is expressed as 270.	AIXM 5.1 Core	X	NM Area+ ECAC+	
	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.	AIXM 5.1 Core		ECAC	*In case of VOR radial.*
	Length/Distance		The geodesic distance between from point and to point.	AIXM 5.1 Core	X	ECAC	
	Level		A code indicating if the route segment is in the upper airspace, the lower airspace or both.	AIXM 5.1 Core	X	World Wide	
	Upper Limit		The Upper Limit of the route segment. The vertical position of the route segment ceiling.	AIXM 5.1 Core+ ADR Extension	X	NM Area+ ECAC+	
	Lower Limit		The Lower Limit of the route segment. The vertical position of the route segment floor.	AIXM 5.1 Core+ ADR Extension	X	NM Area+ ECAC+	
	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.	AIXM 5.1 Core		ECAC	
	Minimum Obstacle Clearance Altitude (MOCA)		The minimum altitude for a defined segment of flight that provides the required obstacle clearance.	AIXM 5.1 Core		ECAC	
	Minimum Turn Altitude		Minimum turn altitude.	AIXM 5.1 Core		ECAC	

Minimum Flight Altitude		Minimum flight altitude.	AIXM 5.1 Core		ECAC	
MAA		Maximum authorised altitude (MAA).	AIXM 5.1 Core		ECAC	
MCA		Minimum Crossing Altitude (MCA).	AIXM 5.1 Core		ECAC	
AMA		Area Minimum Altitude. 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.	AIXM 5.1 Core		ECAC	
MVA		Minimum Vectoring Altitude.	AIXM 5.1 Core		ECAC	
Restrictions		Indication on any area speed and level/altitude restrictions where established.	AIXM 5.1 Core	X	NM Area+ECAC	
Width Left		The distance from the centreline of the route segment to the left edge, when considering the direction from the start point to the end point.	AIXM 5.1 Core	X	ECAC	
Width Right		The distance from the centreline of the route segment to the right edge, when considering the direction from the start point to the end point.	AIXM 5.1 Core	X	ECAC	
Direction of Cruise Level		Indication on the direction of the cruising level (even, odd, NIL).				
	Forward	Indication on the direction of the cruising level (even, odd, NIL) from first point to second point of route segment.	AIXM 5.1 Core	X	ECAC	
	Backward	Indication on the direction of the cruising level (even, odd, NIL) from second point to first point of route segment.	AIXM 5.1 Core	X	ECAC	
PBN Requirements		Area navigation based on performance requirements for aircraft operating along an ATS route, on an instrument approach procedure or in a designated airspace requirements.				
	Navigation Performance Requirements	The navigation accuracy requirement for each PBN (RNAV or RNP) route segment.	AIXM 5.1 Core	X	ECAC	
	Sensor Requirements	Indication on the sensor requirements including any navigation specification limitations.	AIXM 5.1 Core	X	ECAC	
Controlling Unit		A generic term meaning variously all types of 'units' providing all types of services. This includes particularly Air Traffic Management/Control (ATM/ATC) Units.				
	Name	Name of the unit providing the service.	AIXM 5.1 Core	X	NM Area+ECAC	
	Channel	Operating channel of controlling unit.	AIXM 5.1 Core	X	NM Area+ECAC	
	Logon Address	A specified code used for data link logon to the controlling ATS unit.	AIXM 5.1 Core	X	NM Area+ECAC	
Route Availability		The availability status of the Route/Route Segment (direction, cardinal direction, status, levels, including CDRs).	AIXM 5.1 Core+ ADR Extension	X	World Wide	
En-Route Holding						
En-Route Holding		A predetermined manoeuvre which keeps an aircraft within a specified airspace while awaiting further clearance.				
Identification		Identification of the holding procedure.	AIXM 5.1 Core	X	ECAC	
Fix		Identification of the holding procedure fix.	AIXM 5.1 Core	X	ECAC	
Waypoint		Geographical location of the holding waypoint	AIXM 5.1 Core	X	ECAC	
Inbound Track		The inbound track of the holding procedure.	AIXM 5.1 Core	X	ECAC	
Turn Direction		Direction of the turn (LEFT, RIGHT, etc.).	AIXM 5.1 Core	X	ECAC	
Speed		Maximum indicated airspeed.	AIXM 5.1 Core	X	ECAC	
Outbound Course		The radial, course, bearing or magnetic directional course (if navaid is a localizer) from the facility or waypoint on which holding is based.	AIXM 5.1 Core	X	ECAC	
Time/Distance		Time/distance value of the holding procedure.	AIXM 5.1 Core	X	ECAC	
Level						
	Minimum holding level	Minimum holding level of the holding procedure.	AIXM 5.1 Core	X	ECAC	
	Maximum holding level	Maximum holding level of the holding procedure.	AIXM 5.1 Core	X	ECAC	

	Controlling Unit						
		Name	Indication of the controlling unit.	AIXM 5.1 Core	X	ECAC	
		Frequency	The operating frequency/channel of the controlling unit.	AIXM 5.1 Core	X	ECAC	
	Special Holding Entry Procedure		Textual description of the Special VOR/DME entry procedure. Note: In case an entry radial to a secondary fix at the end of the outbound leg has been established for a VOR/DME holding pattern.	AIXM 5.1 Core	X	ECAC	

Subject	Property	Sub-Property	Description	Modelling Reference	Annex 15 IOP Data	Minimum Geographical Coverage	Remark
FLIGHT PROCEDURE							
Instrument Flight Procedure							
Procedure			A series of predetermined manoeuvres with specified protection from obstacles.				
	Identification		Procedure identification.				
		FAS Guidance	The name describing the type of radio navigation aid providing the final approach lateral guidance. This could be: ILS, VOR, RNAV, etc.	AIXM 5.1 Core		ECAC	
		Runway	The runway designator of the landing and take-off direction. Examples: 27, 35L, 01R.	AIXM 5.1 Core	X	NM Area+ECAC	
		Circling	Indication if a procedure is/ is not a circling approach.	AIXM 5.1 Core		ECAC	
		Multiple Code	A single letter suffix, starting with the letter z following the radio navigation aid type shall be used if two or more procedures to the same runway cannot be distinguished by the radio navigation aid type only. For example: VOR y Rwy 20; VOR z Rwy 20.	AIXM 5.1 Core	X	NM Area+ECAC	
		NS Limiter	Sensor specific information in case of a limitation of use (PBN only).	AIXM 5.1 Core		ECAC	
		Name	Name of the instrument flight procedure.	AIXM 5.1 Core	X	NM Area+ECAC	
	Plain Language Designation		Procedure plain language designation.				
		Basic Indicator	The basic indicator shall be the name or name-code of the significvant point where the standard deparutre route terminates.	AIXM 5.1 Core	X	NM Area+ECAC	
		Validity Indicator	The validity indicator shall be a number from 1 to 9.	AIXM 5.1 Core	X	NM Area+ECAC	
		Route Indicator	The route indicator shall be one letter of the alphabet. The letters "I" and "O" shall not be used.	AIXM 5.1 Core	X	NM Area+ECAC	
		Visual Indication	Indication if the route has been established for use by aircraft operating in accordance with the visual flight rules (VFR).	AIXM 5.1 Core	X	NM Area+ECAC	
	Coded Designation		Procedure indicators and designators.				
		Significant Point	The coded designator or name-code of the significant point.	AIXM 5.1 Core	X	NM Area+ECAC	
		Validity Indicator	The Validity Indicator of the procedure.	AIXM 5.1 Core	X	NM Area+ECAC	
		Route Indicator	The Route Indicator of the procedure.	AIXM 5.1 Core	X	NM Area+ECAC	
	Procedure Type		Indication of the type of procedure (departure, arrival, approach, other).	AIXM 5.1 Core	X	NM Area+ECAC	
	PBN Or Conventional		Indication if the procedure is PBN or Conventional.	AIXM 5.1 Core	X	NM Area+ECAC	
	Precision Type		The instrument procedure type. Instrument approach procedures are classified as follows: Non-precision approach (NPA) procedure. - An instrument approach procedure which utilizes lateral guidance but does not utilize vertical guidance. Approach procedure with vertical guidance (APV). - An instrument procedure which utilizes lateral and vertical guidance but does not meet the requirements established for precision approach and landing operations. Precision approach (PA) procedure. - An instrument approach procedure using precision lateral and vertical guidance with minima as determined by the category of operation.	AIXM 5.1 Core	X	NM Area+ECAC	
	Aircraft Category		Indication of which aircraft categories the procedure is intended for.	AIXM 5.1 Core	X	NM Area+ECAC	
	Magnetic Variation		The magnetic variation considered for the procedure design.	AIXM 5.1 Core	X	NM Area+ECAC	
	OCA/H		Obstacle Clearance Altitude (Height) - 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.				
		Aircraft Category	Aircraft category according to ICAO Doc 8168 Vol I or II.	AIXM 5.1 Core	X	NM Area+ECAC	

	Approach Type	Approach type (e.g. Straight-in Cat I, Cat II, LLZ, Circling ...) or specific navigation aid (e.g. stepdown fixes), or a specific navigation specification.	AIXM 5.1 Core	X	NM Area+ECAC	
	Altitude	The lowest altitude used in establishing compliance with appropriate obstacle clearance criteria.	AIXM 5.1 Core	X	NM Area+ECAC	
	Height	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.	AIXM 5.1 Core	X	NM Area+ECAC	
DA/H		Decision Altitude (Height) - a specified altitude or height in the Precision Approach or approach with vertical guidance at which a Missed Approach must be initiated if the required visual reference to continue the approach has not been established. (ICAO Annex 6).				
	Aircraft Category	Aircraft category according to ICAO Doc 8168 Vol I or II.	AIXM 5.1 Core	X	NM Area+ECAC	
	Approach Type	Approach type (e.g. Straight-in, Circling ...) or specific navigation aid (e.g. stepdown fixes), or a specific navigation specification.	AIXM 5.1 Core	X	NM Area+ECAC	
	Altitude	A specified altitude 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.	AIXM 5.1 Core	X	NM Area+ECAC	
	Height	A specified 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.	AIXM 5.1 Core	X	NM Area+ECAC	
MDA/H		Minimum Descent Altitude (Height) - a specified altitude or height in a Non-Precision Approach or Circling Approach below which descent must not be made without the required visual reference. (ICAO Anex 6).				
	Aircraft Category	Aircraft category according to ICAO Doc 8168 Vol I or II.	AIXM 5.1 Core	X	NM Area+ECAC	
	Approach Type	Approach type (e.g. Straight-in, Circling ...) or specific navigation aid (e.g. stepdown fixes), or a specific navigation specification.	AIXM 5.1 Core	X	NM Area+ECAC	
	Altitude	A specified altitude in a 2D instrument approach operation or circling approach operation below which descent must not be made without the required visual reference.	AIXM 5.1 Core	X	NM Area+ECAC	
	Height	A specified height in a 2D instrument approach operation or circling approach operation below which descent must not be made without the required visual reference.	AIXM 5.1 Core	X	NM Area+ECAC	
MSA/ESA		Minimum Sector Altitude/Emergency Sector Altitude - The lowest altitude which may be used which will provide a minimum clearance of 300 m (1 000 ft) above all objects located in an area contained within a sector of a circle of 46 km (25 NM) radius centred on a radio aid to navigation.				
	Sector Start Angle	Start angle of a sector.	AIXM 5.1 Core	X	NM Area+ECAC	
	Sector End Angle	End angle of a sector.	AIXM 5.1 Core	X	NM Area+ECAC	
	Based On Fix	Center of the MSA.	AIXM 5.1 Core	X	NM Area+ECAC	
	Altitude	The minimum altitude for each sector.	AIXM 5.1 Core	X	NM Area+ECAC	
	Restrictions	Minimum sector altitude - The lowest altitude which may be used which will provide a minimum clearance of 300 m (1 000 ft) above all objects located in an area contained within a sector of a circle of 46 km (25 NM) radius centred on a radio aid to navigation.	AIXM 5.1 Core	X	NM Area+ECAC	
	Radius	The radius of each sector.	AIXM 5.1 Core	X	NM Area+ECAC	

TAA		Terminal Arrival Altitude - The lowest altitude that will provide a minimum clearance of 300 m (1 000 ft) above all objects located in an arc of a circle defined by a 46 km (25 NM) radius centred on the initial approach fix (IAF), or where there is no IAF on the intermediate approach fix (IF), delimited by straight lines joining the extremity of the arc to the IF. The combined TAAs associated with an approach procedure shall account for an area of 360 degrees around the IF.				
	Reference Point	TAA reference point (IAF or IF).	AIXM 5.1 Core	X	NM Area+ECAC	
	IAF	TAA Initial Approach Fix reference point.	AIXM 5.1 Core	X	NM Area+ECAC	
	IF	TAA Intermediate Fix reference point.	AIXM 5.1 Core	X	NM Area+ECAC	
	Distance To IAF	The distance of the TAA area boundary from the IAF.	AIXM 5.1 Core	X	NM Area+ECAC	
	Altitude	The terminal arrival altitude value.	AIXM 5.1 Core	X	NM Area+ECAC	
	Sector Start Angle	Start angle of a sector (bearing to TAA reference point).	AIXM 5.1 Core	X	NM Area+ECAC	
	Sector End Angle	End angle of a sector (bearing to TAA reference point).	AIXM 5.1 Core	X	NM Area+ECAC	
	Stepdown Arc	Radius of inner area with lower altitude.	AIXM 5.1 Core	X	NM Area+ECAC	
Procedure Transition		A group of consecutive segments that are part of a branch on an approach procedure, SID or STAR.				
	Type	The type of transition.	AIXM 5.1 Core	X	NM Area+ECAC	
	Instruction	Operational instructions that must be observed when flying the Procedure Transition part.	AIXM 5.1 Core	X	NM Area+ECAC	
	Vector Heading	A heading provided for use, when a departure is designed to incorporate radar vectors at the termination point, in the event ATC instructions are not received prior to or at the termination fix.	AIXM 5.1 Core	X	NM Area+ECAC	
	Departure Runway Transition	The group of takeoff areas that may be referenced from the departure.	AIXM 5.1 Core	X	NM Area+ECAC	
	Trajectory	The graphical represetation of the transition.	AIXM 5.1 Core	X	NM Area+ECAC	
	Transition Leg	One segment of a transition.	AIXM 5.1 Core	X	NM Area+ECAC	
Circling Area		The area in which aircraft circle to land under visual conditions after completing an instrument landing approach.				
	Sectors	The geographic depiction of the circling area.	AIXM 5.1 Core		ECAC	
Circling Restriction		Describes a (sub)sector used to restrict flight within a circling area.				
	Sector Definition	A non graphical definition describing a portion of a circle (a group of properties that help describe a 3D pattern based on start angle, stop angle, inner distance, outer distance and upper/lower altitude).	AIXM 5.1 Core		ECAC	
	Restriction Area	The geographical depiction of the Circling restriction.	AIXM 5.1 Core		ECAC	
Navigation Area		An area specified by sectors with altitude or procedure descent gradient limitations for omnidirectional departures or Pilot navigation area.				
	Navigation Area Type	Indicates what type of area is defined; omnidirectional area, pilot navigation area.	AIXM 5.1 Core		ECAC	
	Sector	A subdivision of the Navigation Area designed to provide safety.	AIXM 5.1 Core		ECAC	
	Centre Point	The point which the navigation area is based on.	AIXM 5.1 Core		ECAC	
	Sector Definition	A non graphical definition describing a portion of a circle (a group of properties that help describe a 3D pattern based on start angle, stop angle, inner distance, outer distance and upper/lower altitude).	AIXM 5.1 Core		ECAC	
	Significant Obstacle	The obstacle that controls the altitude definition of the sector or would penetrate the 40:1 OCS.	AIXM 5.1 Core		ECAC	
	Sector Criteria	The sector criteria used to define a navigation area sector.	AIXM 5.1 Core		ECAC	
Navigation Area Restriction		Areas that are restricted from use for a procedure. Example is restricted areas defined for an omnidirectional departure.				
	Type	Indicated the type of restriction area.	AIXM 5.1 Core		ECAC	

		Sector Definition	A non graphical definition describing a portion of a circle (a group of properties that help describe a 3D pattern based on start angle, stop angle, inner distance, outer distance and upper/lower altitude).	AIXM 5.1 Core		ECAC	
	Procedure DME		DME facilities that are used for a particular segments for DME/DME navigation.				
		Critical DME	An indication that the DME is critical for navigation on a procedure segment.	AIXM 5.1 Core		ECAC	
		Satisfactory	Specifies whether the critical DME passed satisfactory or unsatisfactory.	AIXM 5.1 Core		ECAC	
	Nav Spec Name		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.	AIXM 5.1 Core	X	NM Area+ECAC	
	Operating Minima		Aerodrome Operating Minima - The limits of usability of an aerodrome for: a) take-off, expressed in terms of runway visual range and/or visibility and, if necessary, cloud conditions; b) landing in precision approach and landing operations, expressed in terms of visibility and/or runway visual range and decision altitude/height (DA/H) as appropriate to the category of the operation; c) landing in approach and landing operations with vertical guidance, expressed in terms of visibility and/or runway visual range and decision altitude/height (DA/H); and d) landing in non-precision approach and landing operations, expressed in terms of visibility and/or runway visual range, minimum descent altitude/height (MDA/H) and, if necessary, cloud conditions.	AIXM 5.1 Core		ECAC	
	Temperatue		Min/Max temperature reference.				
		Minimum Temperature	Minimum temperature reference.	AIXM 5.1 Core		ECAC	
		Maximum Temperature	Maximum temperature reference.	AIXM 5.1 Core		ECAC	
	Remote Altimeter Source		Cautionary note indicating the altimetry source.	AIXM 5.1 Core		ECAC	
	Procedure Ref. Datum		Airport or landing threshold.	AIXM 5.1 Core		ECAC	
	PBN Requirements		Specific requirements related to a PBN procedure.				
		Identification	Identification of the navigation specification (RNAV 5, PBN 0.3 …).	AIXM 5.1 Core		ECAC	
		Navigation Specification	Any navigation sensor limitations (GNSS required …).	AIXM 5.1 Core		ECAC	
		Functional Requirements	Any required functionalities that are described as options in the navigation specification, that is, not included in the core navigation specification (RF required …).	AIXM 5.1 Core		ECAC	
	Procedure Availability		The operational status of the Procedure.	AIXM 5.1 Core	X	NM Area+ECAC	
Procedure Segment							
Procedure Segment			A portion of a procedure as defined by two consecutive significant points (significant point - selection between a navaid system, a runway point, an airport reference point, an aiming point or a fix designated point).				
	Start Point		Identification of the start point of the segment.	AIXM 5.1 Core	X	NM Area+ECAC	

	End Point		Identification of the end point or a description of the end of the segment.	AIXM 5.1 Core	X	NM Area+ECAC	
	End Fix Functionality		Indication if the end fix is a fly-by point (A waypoint which requires turn anticipation to allow tangential interception of the next segment of a route or procedure) or fly-over point (A waypoint at which a turn is initiated in order to join the next segment of a route or procedure).	AIXM 5.1 Core	X	NM Area+ECAC	
	End Fix Role		Indication of the role of the end fix (MAPt, IF, IAF, FAF, MAHF, etc.).	AIXM 5.1 Core	X	NM Area+ECAC	
	Procedure Altitude/Height		A specified altitude/height flown operationally a tor above the minimum altitude/height and established to accommodate a stabilized descent ata prescribed descent gradient/angle in the intermediate/final approach segment.	AIXM 5.1 Core	X	NM Area+ECAC	
	MOCA		Minimum Obstacle Clearance Altitude - The minimum altitude for a defined segment that provides the required obstacle clearance.	AIXM 5.1 Core	X	NM Area+ECAC	
	Distance		Geodesic distance to the nearest tenth of a kilometer or tenth of a nautical mile between each successive designated significant point.	AIXM 5.1 Core	X	NM Area+ECAC	
	True Bearing		True track to the nearest tenth of a degree to the nearest degree between each successive significant point.	AIXM 5.1 Core	X	NM Area+ECAC	
	Magnetic Bearing		Magnetic track to the nearest tenth of a degree to the nearest degree between each successive significant point.	AIXM 5.1 Core	X	NM Area+ECAC	
	Gradient		Procedure descent/climb gradient.	AIXM 5.1 Core	X	NM Area+ECAC	
	Speed		Speed limit at a significant point, expressed in units of 10 knots applicable.	AIXM 5.1 Core	X	NM Area+ECAC	
	Controlling Obstacle		An evaluation area used when designing a procedure segment to insure safety of aircraft.	AIXM 5.1 Core	X	NM Area+ECAC	
		Type	Indication if the obstacle is lit/unlit, type of obstacle (church/ windturbine).	AIXM 5.1 Core	X	NM Area+ECAC	
		Position	Coordinates of the controlling obstacle.	AIXM 5.1 Core	X	NM Area+ECAC	
		Elevation	Elevation of the top of the controlling obstacle.	AIXM 5.1 Core	X	NM Area+ECAC	
Final Approach Segment			That segment of an instrument approach procedure in which alignment and descent for landing are accomplished (SBAS, GBAS, APCH).				
	Operation Type		A number that indicates the type of the final approach segment (e.g "0" is coded for a straight-in approach procedure including offset procedures.).	AIXM 5.1 Core	X	NM Area+ECAC	
	Approach Performance Designator		A number that identifies the type of an approach. (“0” is used to identify an LPV approach procedure and a “1” indicates a Category I approach procedure).	AIXM 5.1 Core	X	NM Area+ECAC	
	SBAS Provider		Identifier of a particular satellite-based approach system service provider.	AIXM 5.1 Core	X	NM Area+ECAC	
	RPDS		Reference path data selector (RPDS) - A numerical identifier that is unique on a frequency in the broadcast region and used to select the FAS data block.	AIXM 5.1 Core	X	NM Area+ECAC	
	RPI		Reference Path Identifier - A four-character identifier that is used to confirm selection of the correct approach procedure.	AIXM 5.1 Core	X	NM Area+ECAC	
	LTP/FTP		Landing threshold point (LTP) or fictitious threshold point (FTP).				
		Position	Latitude and Longitude of the LTP/FTP.	AIXM 5.1 Core	X	NM Area+ECAC	
		Ellipsoid Height	The height of the LTP/FTP above the WGS-84 ellipsoid.	AIXM 5.1 Core	X	NM Area+ECAC	
		Orthometric Height	The height of the LTP/FTP as related to the geoid and presented as an MSL elevation.	AIXM 5.1 Core	X	NM Area+ECAC	
	FPAP		Flight path alignment point (FPAP).				
		Position	Latitude and Longitude of the FPAP.	AIXM 5.1 Core	X	NM Area+ECAC	
		Orthometric Height	The height of the FPAP as related to the geoid and presented as an MSL elevation.	AIXM 5.1 Core	X	NM Area+ECAC	
	TCH		Approach Threshold Crossing Height (TCH) - The designated crossing height of the flight path angle above the LTP (or FTP).	AIXM 5.1 Core	X	NM Area+ECAC	

	GPA		Glide Path Angle (GPA) - The angle of the approach path (glide path) with respect to the horizontal plane defined according to WGS-84 at the LTP/FTP.	AIXM 5.1 Core	X	NM Area+ECAC	
	Course Width At Threshold		The semi-width of the lateral course width at the LTP/FTP, defining the lateral offset at which the receiver will achieve full-scale deflection.	AIXM 5.1 Core	X	NM Area+ECAC	
	Delta Length Offset		The distance from the stop end of the runway to the FPAP. It defines the location where lateral sensitivity changes to the missed approach sensitivity.	AIXM 5.1 Core	X	NM Area+ECAC	
	HAL		Horizontal Alert Limit - the radius of a circle in the horizontal plane (the local plane tangent to the WGS-84 ellipsoid), with its centre being at the true position, which describes the region which is required to contain the indicated horizontal position with the required probability for a particular navigation mode assuming the probability of a GPS satellite integrity failure being included in the position solution is less than or equal to E-4 per hour.	AIXM 5.1 Core	X	NM Area+ECAC	
	VAL		Vertical Alert Limit - half the length of a segment on the vertical axis (perpendicular to the horizontal plane of WGS-84 ellipsoid), with its centre being at the true position, which describes the region which is required to contain the indicated vertical position with a probability of 1-E-7 per approach, assuming the probability of a GPS satellite integrity failure being included in the position solution is less than or equal to E-4 per hour.	AIXM 5.1 Core	X	NM Area+ECAC	
	FAS Data Block		Binary string describing the Final Approach Segment (FAS) data block generated with an appropriate software tool. The FAS data block is set of parameters to identify a single precision approach or APV and define its associated approach.	AIXM 5.1 Core	X	NM Area+ECAC	
	CRC Remainder		An 8-character hexadecimal representation of the calculated remainder bits used to determine the integrity of the FAS data block data during transmission and storage.	AIXM 5.1 Core	X	NM Area+ECAC	
Missed Approach Segment			A type of Segment designed in accordance with the rules for missed approach segments having the properties specific to a missed approach segment.. The missed approach segment begins at DA and ends at the clearance limit.				
	Approach		(ICAO) A series of predetermined manoeuvres by reference to flight instruments with specified protection from obstacles from the initial approach fix, or where applicable , from the beginning of a defined arrival route to a point from which a landing can be completed and thereafter, if a landing is not completed, to a position at which holding or en route obstacle clearance criteria apply.	AIXM 5.1 Core	X	NM Area+ECAC	
	Type		Indicates if the missed approach leg is part of the primary instruction.	AIXM 5.1 Core	X	NM Area+ECAC	
	Threshold After MAPT		Indicates if MAP is before or after the Threshold.	AIXM 5.1 Core	X	NM Area+ECAC	
	Height MAPT		Elevation of the missed approach surface at the missed approach point.	AIXM 5.1 Core	X	NM Area+ECAC	
	Required Navigation Performance		[ICAO] Required navigation performance (RNP). [ICAO] Specifies the minimum navigation performance accuracy required in an airspace. It is the navigation performance accuracy of all the user and navigation system combinations within an airspace. Note: It is a tolerance factor for flying. The factor is taken into consideration when determining protected airspace for aircraft.	AIXM 5.1 Core	X	NM Area+ECAC	
	Condition		A particular set of final approach conditions that must be met for the assessed missed approach.	AIXM 5.1 Core	X	NM Area+ECAC	
Procedure Holding							

Procedure Holding			A predetermined manoeuvre which keeps an aircraft within a specified airspace while awaiting further clearance.				
	Identification		Identification of the holding procedure.	AIXM 5.1 Core	X	ECAC	
	Fix		Geographical location that serves as a reference for a holding procedure.	AIXM 5.1 Core	X	ECAC	
	Inbound Course		Inbound true course.	AIXM 5.1 Core	X	ECAC	
	Outbound Course		Outbound true course.	AIXM 5.1 Core	X	ECAC	
	Leg Distance		Outbound dIstance of the leg.	AIXM 5.1 Core	X	ECAC	
	Leg Time		Outbound time of the leg.	AIXM 5.1 Core	X	ECAC	
	Limiting Radial		Limiting radial from the VOR/DME on which the holding is based.	AIXM 5.1 Core	X	ECAC	
	Turn Direction		Direction of the turn (LEFT, RIGHT, etc.)	AIXM 5.1 Core	X	ECAC	
	Minimum Altitude		Minimum holding level to the nearest higher 50 m or 100 ft/flight level.	AIXM 5.1 Core	X	ECAC	
	Maximum Altitude		Maximum holding level to the nearest higher 50 m or 100 ft/flight level.	AIXM 5.1 Core	X	ECAC	
	Speed		Restricted speed for containment in a smaller pattern.	AIXM 5.1 Core	X	ECAC	
	Magnetic Variation		The angular difference between True North and Magnetic North measured at a given position and date.				
		Angle	The magnetic variation of the radio navigation aid of the procedure.	AIXM 5.1 Core	X	ECAC	
		Date	The date on which the magnetic variation had the coresponding value.	AIXM 5.1 Core	X	ECAC	
	Navigation Special Name		Name of the Navigation Specification - set of aircraft and aircrew requirements needed to support a navigation application within a defined airspace concept.	AIXM 5.1 Core	X	ECAC	
Helicopter Procedure							
Helicopter Procedure Specifics			Helicopter procedure specifics.				
	Helicopter Procedure Title (RNAV 263)		Identification of the helicopter procedure.	AIXM 5.1 Core		ECAC	
	HCH		Heliport crossing height.	AIXM 5.1 Core		ECAC	
	IDF		Initial departure fix.	AIXM 5.1 Core		ECAC	
	MAPt		Missed Approach Point.	AIXM 5.1 Core		ECAC	
	Direct Visual Segment		For PinS APP: the portion of flight that connects directly the PinS to the landing location. For PinS DEP: the portion of flight that connects directly the landing location to the IDF. (Track, Distance, Bearing, Crossing height).	AIXM 5.1 Core		ECAC	
	Manoeuvring VS		Manoeuvring Visual Segment - PinS visual segment protected for the following manoeuvres: For PinS APP: Visual manoeuvre from the MAPt around the heliport or landing location to land from a direction other than directly from the MAPt. For PinS DEP: Take-off in a direction other than directly to the IDF followed by visual manoeuvre to join the instrument segment at the IDF.				
		Center Line	Centre line of take-off climb surface.	AIXM 5.1 Core		ECAC	
		Manoeuvring Area	Area where the pilot is expected to manoeuvre visually.	AIXM 5.1 Core		ECAC	
		No Manoeuvring Area	Area where manoeuvring is prohibited.	AIXM 5.1 Core		ECAC	
		Ingress Tracks	Manoeuvring Visual Segment - PinS visual segment protected for the following manoeuvres: For PinS APCH: Visual manoeuvre from the MAPt around the heliport or landing location to land from a direction other than directly from the MAPt. For PinS DEP: Take-off in a direction other than directly to the IDF followed by visual manoeuvre to join the instrument segment at the IDF.	AIXM 5.1 Core		ECAC	
	HAS		Height above surface diagram - Radius, Height above Surface.	AIXM 5.1 Core		ECAC	
	Proceed Visually Text		Text indicating that the procedure has Proceed Visually instruction.	AIXM 5.1 Core		ECAC	
	Proceed VFR Text		Text indicating that the procedure has Proceed VFR instruction.	AIXM 5.1 Core		ECAC	

	VSDA		Visual segment descent angle.	AIXM 5.1 Core		ECAC	
	Ingress Tracks		Length, Width, Bearing.	AIXM 5.1 Core		ECAC	

Subject	Property	Sub-Property	Description	Modelling Reference	Annex 15 IOP Data	Minimum Geographical Coverage	Remark
RADIO NAVIGATION AID							
Radio Navigation Aid							
Radio Navigation Aid			A service providing guidance information or position data for the efficient and safe operation of aircraft supported by one or more radio navigation aids (VOR, DME, ILS_DME, MLS_DME, SDF, etc.).				
	Type		Type of Radio Navigation Aid.	AIXM 5.1 Core	X	World Wide	
	Identification		The identifying code given to the navaid.	AIXM 5.1 Core	X	World Wide	
	Name		The long name given to the navaid.	AIXM 5.1 Core	X	World Wide	
	Area of Operation		Indication whether navigation aid serves en-route (E), aerodrome (A) or dual (AE) purposes.	AIXM 5.1 Core	X	ECAC	
	Aerodrome Served		The ICAO location indicator or name of the aerodromes served.	AIXM 5.1 Core	X	ECAC	
	Runway Served		Designator of the runway served.	AIXM 5.1 Core	X	ECAC	
	Operating Authority		Name of the operating authority of the facility.	AIXM 5.1 Core		ECAC	
	Type of Supported OPs		Type of supported operation for ILS/MLS, basic GNSS, SBAS, and GBAS.	AIXM 5.1 Core	X	NM Area+ECAC	
	Flight Checked		Indicates if the navaid equipment has been flight checked.	AIXM 5.1 Core		ECAC	
	Emission Class		A code indicating the type of emission, as defined at the 1979 ITU World Administrative Radio Conference.	AIXM 5.1 Core		ECAC	
	Mobile		Indicates if the navaid equipment is mobile.	AIXM 5.1 Core		ECAC	
	Co-Location		Information that a navaid is co-located with another navaid.	AIXM 5.1 Core		ECAC	
	Magnetic Variation		The angular difference between True North and Magnetic North measured at a given position and date.				
		Angle	The magnetic variation at the radio navigation aid.	AIXM 5.1 Core	X	NM Area	
		Date	The date on which the magnetic variation had the corresponding value.	AIXM 5.1 Core	X	NM Area	
	Station Declination		An alignment variation of the navaid between the zero degree radial and true north, determined at the time the station is calibrated.	AIXM 5.1 Core	X	ECAC	
	Frequency		Frequency or tuning frequency of the radio navigation aid.	AIXM 5.1 Core	X	World Wide	
	Channel		The channel number of the radio navigation aid.	AIXM 5.1 Core	X	World Wide	
	RPI		Reference path identifier(s).	AIXM 5.1 Core		ECAC	
	Position		Geographical location of the radio navigation aid.	AIXM 5.1 Core	X	World Wide	
	Elevation		Elevation of the transmitting antenna of DME. Elevation of GBAS reference point.	AIXM 5.1 Core	X	ECAC	
	Elevation GBAS		Elevation of GBAS reference point, and the ellipsoid height of the point to the nearest metr e or foot. For SBAS, the ellipsoid height of the landing threshold point (LTP) or the fictitious threshold point (FTP) to the nearest metre or foot.	AIXM 5.1 Core	X	ECAC	
	Ellipsoidal Height		Ellipsoid height of the GBAS reference point.	AIXM 5.1 Core	X	ECAC	
	Zero Bearing Direction		Direction of the 'zero bearing' provided by the station. For example: magnetic north, true north.	AIXM 5.1 Core	X	World Wide	
	Localizer Alignment		ILS Localizer Alignment.				
		Bearing	The localizer course.	AIXM 5.1 Core		ECAC	
		Type	Type of localizer alignment, true or magnetic.	AIXM 5.1 Core		ECAC	
	Zero Azimuth Alignment		MLS zero azimuth alignment.	AIXM 5.1 Core		ECAC	
	Angle		The angle of the glide path of an ILS or the normal glide path angle for the MLS installation.	AIXM 5.1 Core		ECAC	
	RDH		The value of the ILS Reference Datum Height (ILS RDH).	AIXM 5.1 Core		ECAC	
	Width Course		The localizer course width.	AIXM 5.1 Core		ECAC	
	ILS Localizer Antena RWY End Distance		ILS localizer runway/FATO end distance.	AIXM 5.1 Core		ECAC	

	ILS Glideslope Antenna TRSH Distance		ILS glideslope antenna - threshold distance along centerline.	AIXM 5.1 Core		ECAC	
	ILS Marker TRSH Distance		ILS markter - threshold distance.	AIXM 5.1 Core		ECAC	
	ILS DME Antenna TRSH Distance		ILS DME antenna - threshold distance along centerline.	AIXM 5.1 Core		ECAC	
	MLS Azimuth Antenna RWY End Distance		MLS azimuth antenna - runway/FATO end distance.	AIXM 5.1 Core		ECAC	
	MLS Elevation Antenna TRHS Distance		MLS elevation antenna - threshold distance along centre line.	AIXM 5.1 Core		ECAC	
	MLS DME Antenna TRHS Distance		MLS DME/P antenna - threshold distance along centre line.	AIXM 5.1 Core		ECAC	
	Signal Polarization		GBAS signal polarization (GBAS/H or GBAS/E).	AIXM 5.1 Core		ECAC	
	DOC		Designated operational coverage (DOC or standard service volume SSV) as range or service volume radius from the navaid / GBAS reference point, height and sectors if required.	AIXM 5.1 Core		ECAC	
	Navaid Operational Status		The operational status of the Navaid (operational status, signal type).	AIXM 5.1 Core	X	En-route NAVAID >> World Wide Airport NAVAID >>ECAC+EWD	
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.				
	Name		The name of the GNSS element (GPS, GBAS, GLONASS, EGNOS, MSAS, WAAS, etc.	AIXM 5.1 Core		ECAC	
	Frequency		The value of the frequencies.	AIXM 5.1 Core		ECAC	
	Service Area		Geographical location of the GNSS service area.	AIXM 5.1 Core		ECAC	
	Coverage Area		Geographical location of the GNSS coverage area.	AIXM 5.1 Core		ECAC	
	Operating Authority		Name of the operating authority of the facility.	AIXM 5.1 Core		ECAC	
	Availability		The operational status of the GNSS.	AIXM 5.1 Core		ECAC	
Special Navigation Station/Systems							
Special Navigation Station			A land based station of a special navigation system.				
	Name		The textual name of the station.	AIXM 5.1 Core		ECAC	
	Type		A code indicating the type of service within the chain. E.g. Master, Red Slave (DECCA), Slave (LORAN) etc..	AIXM 5.1 Core		ECAC	
	Frequency		The value of the emission frequency.	AIXM 5.1 Core		ECAC	
	Emission		A code indicating the type of emission, as defined at the 1979 ITU World Administrative Radio Conference.	AIXM 5.1 Core		ECAC	
	System Chain		A special navigation system chain	AIXM 5.1 Core		ECAC	
	Responsible Organisation		The organization responsible for the equipment.	AIXM 5.1 Core		ECAC	
	Position		The graphical point of the special navigation station.	AIXM 5.1 Core		ECAC	
	Special Navigation Station Status		The operational status of the Special Navigation System.	AIXM 5.1 Core		ECAC	

Special Navigation System			A wide area (worldwide) navigation system based on a chain of land stations or a satellite constellation providing radio frequency signals which can be used by airborne equipment to determine at least, the aircrafts two-dimensional position or, depending on the capability of the system, the three-dimensional position.				
	Type		Type of service available (master signal, slave signal, etc.).	AIXM 5.1 Core		ECAC	
	Designator		The code assigned to uniquely identify to the special navigation system.	AIXM 5.1 Core		ECAC	
	Name		The long name given to the navaid.	AIXM 5.1 Core		ECAC	
	Frequency		The value of the frequency.	AIXM 5.1 Core		ECAC	
	Channel		Channel number.	AIXM 5.1 Core		ECAC	
	Position		A geographic position of the special navigation system.	AIXM 5.1 Core		ECAC	
	Operating Authority		Operating authority of the facility.	AIXM 5.1 Core		ECAC	
	Facility Coverage		Description of special navigation system faciity coverage.	AIXM 5.1 Core		ECAC	
	Special Navigation Station Status		The operational status of the Special Navigation System.	AIXM 5.1 Core		ECAC	
Aeronautical Ground Lights							
Aeronautical Ground Lights			Ground lights and other light beacons designating geographical positions which are selected by the State as being significant.				
	Type		Type of beacon.	AIXM 5.1 Core		ECAC+EWD	
	Designator		The code assigned to uniquely identify to the beacon.	AIXM 5.1 Core		ECAC+EWD	
	Name		The name of the city or town or other identification of the beacon.	AIXM 5.1 Core		ECAC+EWD	
	Hours of Operations		Hours of operations of the aeronautical ground lights.	AIXM 5.1 Core		ECAC+EWD	
	Intensity		Intensity of the light of the beacon.	AIXM 5.1 Core		ECAC+EWD	
	Characteristics		Information about the characteristics of beacon.	AIXM 5.1 Core		ECAC+EWD	
	Position		Geographical location of the beacon.	AIXM 5.1 Core		ECAC+EWD	
Marine Lights			Type of aeronautical ground lights.				
	Location		Geographical location of the beacon.	AIXM 5.1 Core		ECAC+EWD	
	Visibility Range		The visibility range of the beacon.	AIXM 5.1 Core		ECAC+EWD	
	Characteristics		Information about the characteristics of the beacon.	AIXM 5.1 Core		ECAC+EWD	

Subject	Property	Sub-Property	Description	Modelling Reference	Annex 15 IOP Data	Minimum Geographical Coverage	Remark
GEO-OBJECT							
Obstacle							
Obstacle			All fixed (whether temporary or permanent) and mobile objects, or parts thereof that extend above the surface of the Earth.				
	Obstacle Identifier		Unique identifier of obstacle.	AIXM 5.1 Core		ECAC+EWD	
	Operator/Owner		Name and Contact information of obstacle operator or owner.	AIXM 5.1 Core		ECAC	
	Horizontal Position		The horizontal position should contain sufficient location information to describe the profile of the obstacle, either as a point, line or polygon.	AIXM 5.1 Core		ECAC+EWD	
	Horizontal Extent		The horizontal extent could be used to indicate the horizontal footprint of an obstacle.	AIXM 5.1 Core		ECAC	
	Elevation		Elevation of the highest point of the obstacle.	AIXM 5.1 Core		ECAC+EWD	
	Height		Whilst the elevation of an obstacle typically comprises its height above MSL, its height above ground level should also be measured (data level).	AIXM 5.1 Core		ECAC	
	Obstacle Type		An indication of the type of obstacle recorded. This should be assessed against a generic set of obstacle types which includes types such as tree, building, wind-turbine, etc.	AIXM 5.1 Core		ECAC+EWD	
	Geometry Type		An indication of how the obstacle is described, in respect of whether it is a point, line or polygon.	AIXM 5.1 Core		ECAC	
	Date and Time Stamp		The date and time at which the data set was created or last modified should also be provided.	AIXM 5.1 Core		ECAC	
	Operations		This attribute is used to reflect the current status of the obstacle. It may be used, for example, to indicate that the obstacle is: Planned; Under construction; Completed; Demolition planned; In demolition	AIXM 5.1 Core		ECAC	
	Effectivity		Effectivity of temporary types of obstacles.	AIXM 5.1 Core		ECAC	
	Lighting		The lighting system provided for a obstacle lights.				
		Type	Any lighting which may be used for aviation purposes (i.e. that required by ICAO) which is situated on the obstacles in the data set should be recorded using this attribute. It is applicable to individual obstacles and, therefore, applies at the data level. The actual lighting associated with an obstacle should be confirmed. Sole reliance upon legal obligations for the owner to notify the authorities of lighting should be minimised.	AIXM 5.1 Core		ECAC+EWD	
		Colour	A code indicating the colour of the lights in the group.	AIXM 5.1 Core		ECAC+EWD	
	Marking		Any markings intended to be used for aviation purposes (i.e. those required by ICAO) which are applied to obstacles in the data set should be recorded using this attribute. It is applicable to individual obstacles and, therefore, applies at the data level. The actual marking associated with an obstacle should be confirmed. Sole reliance upon legal obligations for the owner to notify the authorities of marking should be minimised.	AIXM 5.1 Core		ECAC	
	Material		The type(s) of material that compose the load-bearing structure and/or exterior facing of a vertical construction (for example: a building or non-building structure).	AIXM 5.1 Core		ECAC	
	Lighting Status		The operational status of the Obstacle lighting.	AIXM 5.1 Core		ECAC+EWD	
Obstacle Area			An area defined by ICAO for the purpose of collecting obstacle data in electronic format, as necessary to satisfy requirements of air navigation systems or functions.				
	Type		Indicates the type of the obstacle coverage area. Examples: Area 1, 2, 3 or 4.	AIXM 5.1 Core		ECAC	
	Obstruction ID Surface Condition		Obstruction identification surface that obstructing area represents.	AIXM 5.1 Core		ECAC	

	Surface Geometry		Geographical location of the obstacle area.	AIXM 5.1 Core		ECAC	
Geographic Data							
Buildings			Buildings (of operational significance) and other salient/prominent (aerodrome) features.				
	Name		Name of the building.	AIXM 5.1 Core		ECAC	
	Geometry		Geographical location of the building.	AIXM 5.1 Core		ECAC	
Built Up Areas			Areas covered by cities, towns and villages.				
	Name		Name of the build-up area.	None		ECAC	
	Geometry		Geographical location of the build-up area.	None		ECAC	
Railroads			All railroads having landmark value.				
	Name		Name of the railroad.	None		ECAC	
	Geometry		Geographical location of the railroads.	None		ECAC	
Highways And Roads			All highways and roads having landmark value.				
	Name		Name of highways and roads.	None		ECAC	
	Geometry		Geographical location of highways and roads.	None		ECAC	
Landmarks			Natural and cultural landmarks, such as bridges, prominent transmission lines, permanent cable car installations, wind turbines, forts, ruins, levees, pipelines, rocks, bluffs, cliffs, sand dunes, isolated lighthouses and lightships, when considered to be of importance for visual air navigation.				
	Name		Description of the landmark.	None		ECAC	
	Geometry		Geographical location of the railroads.	None		ECAC	
Hydrography			All water features comprising shore lines, lakes, rivers and streams (including those non-perennial in nature), salt lakes, glaciers and ice caps.				
	Name		Name of the water feature.	AIXM 5.1 Core		ECAC	
	Geometry		Geographical location of water feature.	AIXM 5.1 Core		ECAC	
Wooded Areas			Wooded areas.				
	Geometry		Geographical location of wooded area.	None		ECAC	
Waypoint/Procedure Point							
Designated Point			A geographical location not marked by the site of a radio navigation aid, used in defining an ATS route, the flight path of an aircraft or for other navigation or ATS purposes.				
	ATC Reporting Requirements		Indicating the type of position report required by an ATC Unit. Eg.: compulsory or on request.	AIXM 5.1 Core	X	ECAC	
	Type		Waypoint (a point used for RNAV procedures/routes); Oceanic Entry/Exit (the Oceanic entry/exit attribute indicates whether the Significant Point is an oceanic entry point); FRA Points (FRA Exit, FRA Entry, FRA Intermediate, FRA Departure and FRA Arrival); Other.	AIXM 5.1 Core+ ADR Extension	X	World Wide	
	Name		Names, coded designators or name-codes of significant waypoint.	AIXM 5.1 Core	X	World Wide	
	Identification		The coded designator of the point. For example, the five-letter ICAO name of the point, etc..	AIXM 5.1 Core	X	World Wide	
	Location		The geographical location of the waypoint.	AIXM 5.1 Core	X	World Wide	
	Formation		Association with existing navigational aids.				
		Navaid	Station identification of the reference VOR/DME.	AIXM 5.1 Core	X	NM Area+ECAC	
		Bearing	Bearing from the reference VOR/DME, if the waypoint is not collocated with it.	AIXM 5.1 Core	X	NM Area+ECAC	
		Distance	Distance from the reference VOR/DME, if the waypoint is not collocated with it.	AIXM 5.1 Core	X	NM Area+ECAC	
Segment Point			Indicates a point associated with a defined segment.				
	Identification		Names, coded designators or name-codes assigned to the significant point.	AIXM 5.1 Core	X	NM Area+ECAC	
	Type		Indication of the type of fix, such as: Navaid, Int, WPT.	AIXM 5.1 Core	X	NM Area+ECAC	
	Position		Geographical location of the fix.	AIXM 5.1 Core	X	NM Area+ECAC	
	ATC Reporting Requirements		Indication of ATS / MET reporting requirement “compulsory”, “on-request” or "nil".	AIXM 5.1 Core	X	NM Area+ECAC	

	VFR Reporting Point		Bridge, Church Name.	AIXM 5.1 Core	X	NM Area+ECAC	
	Fly-By/Fly-Over		Indicates if the aircraft is required to fly directly over the fix. If code is Yes, then it is a 'fly-over' waypoint. If the code is No, then the associated fix is a 'fly-by' waypoint. [ICAO] Waypoints are identified as either flyover or fly-by. Fly-by waypoint. A waypoint which requires turn anticipation to allow tangential interception of the next segment of a route or procedure Flyover waypoint. A waypoint at which a turn is initiated in order to join the next segment of a route or procedure.	AIXM 5.1 Core	X	NM Area+ECAC	
	Waypoint		A point used for RNAV procedures/routes.	AIXM 5.1 Core	X	World Wide	
	Radar Guidance		Radar guidance is possible for reaching this point.	AIXM 5.1 Core		ECAC	
	Extended Service Volume		An approved and flight checked extension to the standard service volume of a navaid.	AIXM 5.1 Core		ECAC	
	Formation		Association with existing navigational aids.				
		Navaid	Station identification of the reference VOR/DME.	AIXM 5.1 Core	X	NM Area+ECAC	
		Bearing	Bearing from the reference VOR/DME, if the waypoint is not collocated with it.	AIXM 5.1 Core	X	NM Area+ECAC	
		Distance	Distance from the reference VOR/DME, if the waypoint is not collocated with it.	AIXM 5.1 Core	X	NM Area+ECAC	
	En-Route Segment Point		Indicates a point associated with a defined En-Route segment.				
		Role Free Flight	Free flight is a an air traffic control method that uses no centralized control (e.g. air traffic controllers). Instead, parts of airspace are reserved dynamically and automatically in a distributed way using computer communication to ensure the required separation between aircraft. (PITCH, CATCH, Other).	AIXM 5.1 Core	X	NM Area+ECAC	
		Role RVSM	A code indicating that the point has a specific role in the reduced vertical separation minima (RVSM) context. (RVSM Entry Point, RVSM Exit Point, Other).	AIXM 5.1 Core	X	NM Area+ECAC	
		Turn Radius	The recommended turn radius when continuing on the previous segment of the route (start point) or when continuing on the next segment of the route(end point).	AIXM 5.1 Core		ECAC	
		Role Military Training	A code indicating the usage of the point in the case of a military training route.	AIXM 5.1 Core		NM Area+ECAC	
	Terminal Segment Point		Indicates a point or a condition associated with a defined segment leg.				
		Role	Identifies the function or position the point plays in the approach procedure (ex. Initial approach fix, Intermediate fix, etc.).	AIXM 5.1 Core	X	NM Area+ECAC	
		Lead Radial	The lead radial provides information for aircraft with single receiving equipment to change the receiver to the localizer or other facility providing the course guidance and to ensure the aircraft is within the clearance coverage area of LOC facilities before changing frequency or accepting on-course indication.	AIXM 5.1 Core		NM Area+ECAC	
		Lead DME	The lead DME, like the lead Radial, provides information for aircraft with single receiving equipment to change the receiver to the localizer or other facility providing the course guidance and to ensure the aircraft is within the clearance coverage area of LOC facilities before changing frequency or accepting on-course indication.	AIXM 5.1 Core		NM Area+ECAC	
		Indicator FACF	Indicates the point is also a Final Approach Course Fix (FACF).	AIXM 5.1 Core	X	NM Area+ECAC	

Subject	Property	Sub-Property	Description	Modelling Reference	Annex 15 IOP Data	Minimum Geographical Coverage	Remark
SERVICE							
Organisation							
Organisation Authority			A subject used to model various Organisations and Authorities. For example: ATS Organisations, Aircraft Operating Agencies (AOA), States, Groups of States, etc.				*Note: The Aircraft Operating Agencies including ICAO/IATA designator and name shall be maintained by eEAD DOP. Ref. Source - ICAO Document 8585 and IATA Resolution 762.*
	Name		The full official name of the State, Organisation, Authority, aircraft operating agency, handling agency etc.	AIXM 5.1 Core	X	World Wide	
	Designator		A coded identifier of the organisation, authority, agency or unit. Description: CA= Canada, FAA= Federal Aviation Administration, UK = United Kingdom, ICAO = International Civil Aviation Organization.	AIXM 5.1 Core	X	World Wide	
	AOA ICAO Identity		ICAO coded designator of an Aircraft Operating Agencie.	AIXM 5.1 Core	X	World Wide	
	AOA IATA Designator		IATA coded designator of the Aircraft Operating Agencie.	ADR Extension	X	World Wide	
	Type		A code indicating the nature of an authority in terms of its status or business role in ATM. For example: State, group of States, organisation within a State, aircraft operating agency, etc.	AIXM 5.1 Core	X	World Wide	
	Military		Information on the type of operations allowed.	AIXM 5.1 Core	X	NM Area+ECAC	
	Contact		Contact details for the organisation (phone, postal address, e-mail, etc.)	AIXM 5.1 Core	X	World Wide	
	Related Organisation Authority		The related organisation, authority or agency.	AIXM 5.1 Core	X	World Wide	
Unit							
Unit			A generic term meaning variously all types of 'units' providing all types of services. This includes particularly Air Traffic Management (ATM) Units but also units which are not express verbs included in ATM such as MET, COM etc.				
	Name		The full textual name of a unit. This name must be established according to the rules specified by ICAO, viz.: in the official language of the country, transposed into the Latin Alphabet where necessary.	AIXM 5.1 Core	X	World Wide	
	Type		A type by which the Unit is recognised, usually related to the standard type of services provided by it (e.g. area control centre, advisory centre, aeronautical information services office. Note: Including OTHER_ ADR_AMC).	AIXM 5.1 Core	X	World Wide	
	Compliant ICAO		A code indicating whether the Unit is setup according to the ICAO SARPS.	AIXM 5.1 Core	X	World Wide	
	Designator		A coded designator associated with the Unit. For example, the ICAO Location Indicator of an ACC, as listed in DOC 7910.	AIXM 5.1 Core	X	World Wide	
	Military		Indicates whether the Unit is civil, military or joint.	AIXM 5.1 Core	X	World Wide	
	Position		The geographical point of the Unit.	AIXM 5.1 Core	X	World Wide	
	Aerodrome Location		The Aerodrome or Heliport where the Unit is located.	AIXM 5.1 Core	X	World Wide	
	Owner Organisation		The Organisation/Authority to which the Unit belongs.	AIXM 5.1 Core	X	World Wide	
	Contact		Contact details for the unit (phone, postal address, e-mail, etc.)	AIXM 5.1 Core	X	World Wide	
	Related Unit		The related unit.	AIXM 5.1 Core	X	World Wide	
	Unit Availability		The operational status of the Unit.	AIXM 5.1 Core	X	World Wide	
Address							
Contact Information			Information required to enable contact with the responsible person and/or organisation.				
	Name		The official name of the contact.	AIXM 5.1 Core	X	World Wide	
	Title		The official title of the contact.	AIXM 5.1 Core	X	World Wide	
	Address		A postal address for the contact.	AIXM 5.1 Core	X	World Wide	

	Network Node		A direct link for the contact, over a data communication network.	AIXM 5.1 Core	X	World Wide	
	Phone Fax		A phone or fax number for the contact.	AIXM 5.1 Core	X	World Wide	
	Online Contact		On-line or Network information that can be used to contact the individual or organisation, including eMail address and web site page.				
		Network	The official name telecommunication network on which the resource is located.	AIXM 5.1 Core	X	World Wide	
		Linkage	Location (address) for on-line access using a Uniform Resource Locator address or similar addressing scheme such as http://www.statkart.no/isotc211.	AIXM 5.1 Core	X	World Wide	
		Protocol	The connection protocol to be used.	AIXM 5.1 Core	X	World Wide	
		E-Mail	The address of the electronic mailbox of the responsible organisation or individual.	AIXM 5.1 Core	X	World Wide	
	Postal Address		Physical address at which the organization or individual may be contacted. Derived from ISO19115-2003.				
		City	The city of the location or organisation.	AIXM 5.1 Core	X	World Wide	
		Administrative Area	The state or province of the location or organisation.	AIXM 5.1 Core	X	World Wide	
		Postal Code	The ZIP or other postal code for the location or organisation.	AIXM 5.1 Core	X	World Wide	
		Country	The country of the physical address for the location or organisation. Full name, not ISO 3166 abbreviations.	AIXM 5.1 Core	X	World Wide	
	Telephone Contact		Telephone numbers at which the organisation or individual may be contacted. From ISO19115-2003.				
		Voice	The telephone number by which individuals can speak to the responsible organisation or individual.	AIXM 5.1 Core	X	World Wide	
		Facsimile	The telephone number of a facsimile machine for the responsible organisation or individual.	AIXM 5.1 Core	X	World Wide	
Special Date							
Special Date			A calendar date that has a special meaning for a particular State/ organisation and which may be referred to in the description of the schedules associated with various aeronautical features.				
	Type		An indication of the kind of the special dates.	AIXM 5.1 Core	X	World Wide	
	Date Day		The calendar date concerned.	AIXM 5.1 Core	X	World Wide	
	Date Year		The year concerned. If no year is indicated, then the same date will be concerned every year.	AIXM 5.1 Core	X	World Wide	
	Name		The name by which the date is known by the public (especially for public holidays).	AIXM 5.1 Core	X	World Wide	
	Authority		The State or organisation that observes the special date.	AIXM 5.1 Core	X	World Wide	
Services							
1. Aerodrome Services							
Passenger Service			Passenger services and facilities available at an aerodrome/heliport (like medical facilities) or in the surrounding area (hotels in city etc.).				
	Hotels		Passenger facilities available at the aerodrome/heliport at or in the vicinity of aerodrome or a reference to other information sources such as a website.	AIXM 5.1 Core		ECAC	
	Restaurants		Passenger facilities available at the aerodrome/heliport at or in the vicinity of aerodrome or a reference to other information sources such as a website.	AIXM 5.1 Core		ECAC	
	Transportation		Passenger facilities available at the aerodrome/heliport at or in the vicinity of aerodrome or a reference to other information sources such as a website.	AIXM 5.1 Core		ECAC	
	Medical Facilities		Passenger facilities available at the aerodrome/heliport at or in the vicinity of aerodrome or a reference to other information sources such as a website.	AIXM 5.1 Core		ECAC	
	Bank and Post Office		Passenger facilities available at the aerodrome/heliport at or in the vicinity of aerodrome or a reference to other information sources such as a website.	AIXM 5.1 Core		ECAC	

	Tourist Office		Passenger facilities available at the aerodrome/heliport at or in the vicinity of aerodrome or a reference to other information sources such as a website.	AIXM 5.1 Core		ECAC	
	Service Operational Status		The operational status of the Passenger Service.	AIXM 5.1 Core		ECAC	
Aircraft Ground Service			A kind of maintenance, support or supply service provided to aircraft at the ground.				
	De-Icing Facilities		Handling services and facilities available at the aerodrome/heliport to include cargo-handling facilities.	AIXM 5.1 Core		ECAC	
	Hangar Space for Visiting Aircraft		Handling services and facilities available at the aerodrome/heliport to include cargo-handling facilities.	AIXM 5.1 Core		ECAC	
	Repair Facilities for Visiting Aircraft		Handling services and facilities available at the aerodrome/heliport to include cargo-handling facilities.	AIXM 5.1 Core		ECAC	
	Cargo-Handling Facilities		Handling services and facilities available at the aerodrome/heliport to include cargo-handling facilities.	AIXM 5.1 Core		ECAC	
	Disabled Aircraft Removal		Capability and information on disabled aircraft removal services.	AIXM 5.1 Core		ECAC	
	Service Operational Status		The operational status of the Aircraft Ground Service.	AIXM 5.1 Core		ECAC	
Aerodrome Clearance Service			A kind of service that provides clearance capabilities for Aerodrome surfaces.				
	Types of Clearing Equipment		Equipment for the clearance of aerodrome/heliport movement areas specifying type(s) of clearing equipment.	AIXM 5.1 Core		ECAC	
	Snow Plan		Description of the snow removal priorities.	AIXM 5.1 Core		ECAC	
	Service Operational Status		The operational status of the Aerodrome Clearance Service.	AIXM 5.1 Core		ECAC	
Aerodrome Supplies Service			A kind of service that provides supplies (fuel, oil, oxygen, etc.) to aircraft.				
	Fuel Category		A code indicating a type of fuel for aircraft and helicopters (e.g. OCT73, OCT80-87, AVGAS, OCT100-130, OCT115-145, MOGAS, JET, A1, A1+, B, JP4, JP5).	AIXM 5.1 Core		ECAC	
	Oil Category		A code indicating the category of oil available at an aerodrome/heliport.	AIXM 5.1 Core		ECAC	
	Fuelling Facilities		Handling services and facilities available at the aerodrome/heliport to include cargo-handling facilities.	AIXM 5.1 Core		ECAC	
	Service Operational Status		The operational status of the Aerodrome Supplies Service.	AIXM 5.1 Core		ECAC	
Fire Fighting Service			A kind of Aerodrome service that provides rescue and fire fighting capabilities for aircraft in emergency at and around the Aerodrome.				
	Category		A standard categorisation of the rescue and fire-fighting capabilities of an aerodrome on the basis of the length and fuselage width of the largest aircraft to be rescued.	AIXM 5.1 Core		ECAC	
	Rescue Equipment		The rescue and fire fighting equipment available at the aerodrome/heliport.	AIXM 5.1 Core		ECAC	
	Service Operational Status		The operational status of the Fire Fighting Service.	AIXM 5.1 Core		ECAC	
Aerodrome Information Service (Meteo, AIS, BRIEFING, NOTAM, etc.)			A kind of service that consists in the provision of aeronautical, meteorological, traffic and related information to aircraft crew and other actors involved in flight operations, in flight or on the ground.				
	Type		The type of information service provided.	AIXM 5.1 Core		ECAC	
	Name		Name of the associated meteorological office.	AIXM 5.1 Core		ECAC	
	Hours of Service		Hours of service and, where applicable, the designation of the responsible meteorological office outside these hours.	AIXM 5.1 Core		ECAC	
	Office Outside Hours		Hours of service and, where applicable, the designation of the responsible meteorological office outside these hours.	AIXM 5.1 Core		ECAC	
	Office Responsible for TAF Preparation		Office responsible for preparation of TAFs and periods of validity and interval of issuance of the forecasts.	AIXM 5.1 Core		ECAC	

	TAF Periods of Validity		Office responsible for preparation of TAFs and periods of validity and interval of issuance of the forecasts.	AIXM 5.1 Core		ECAC	
	Trend Forecast		Availability of the trend forecasts for the aerodrome/ Heliport, and interval of issuance.	AIXM 5.1 Core		ECAC	
	Interval of Issuance		Availability of the trend forecasts for the aerodrome/ Heliport, and interval of issuance.	AIXM 5.1 Core		ECAC	
	Briefing/Consultation Provided		Information on how briefing and/or consultation is provided.	AIXM 5.1 Core		ECAC	
	Flight Documentatin Language(s) Used		Types of flight documentation supplied and language(s) used in flight documentation.	AIXM 5.1 Core		ECAC	
	Charts and Other Information Available for Briefing or Consultation		Charts and other information displayed or available for briefing or consultation.	AIXM 5.1 Core		ECAC	
	Supplementary Equipment Available for Providing Information		Supplementary equipment available for providing information on meteorological conditions, e.g. weather radar and receiver for satellite images.	AIXM 5.1 Core		ECAC	
	Air Traffic Services Unit(s) Provided with Meteorological Information		The air traffic services unit(s) provided with meteorological information.	AIXM 5.1 Core		ECAC	
	Service Operational Status		The operational status of the Aerodrome Information Service.	AIXM 5.1 Core		ECAC	
2. Other Services							
Air Traffic Control Service			A kind of service that provides control and separation services to aircraft in the air.				
	Radar Assisted		A code indicating if the service is provided with radar assistance.	AIXM 5.1 Core		ECAC	
	Data Link Enabled		Indicates if Controller-Pilot Data-Link Communication (CPDLC) is available in support of the service.	AIXM 5.1 Core	X	ECAC	
	Data Link Channel		The channel on which the data-link takes place,if applicable.	AIXM 5.1 Core	X	ECAC	
	Type		The type of air traffic control service provided.	AIXM 5.1 Core	X	ENV_EXTR	
	Client Airport		The Airport/Heliport around which the air traffic is controlled.	AIXM 5.1 Core	X	ENV_EXTR	
	Client Airspace		The airspace for which the air traffic separation service is provided.	AIXM 5.1 Core	X	ENV_EXTR	
	Client Route		The route portion for which the air traffci control is provided.	AIXM 5.1 Core		ECAC	
	Client Procedure		The procedure on which the air traffic control service is provided.	AIXM 5.1 Core		ECAC	
	Client Holding		The Holding Pattern on which the air traffic control is provided.	AIXM 5.1 Core		ECAC	
	Aircraft Locator		The Direction Finder assisting the ATC service (such as APP, TWR, etc.).	AIXM 5.1 Core	X	ENV_EXTR	
	Service Operational Status		The operational status of the Search Rescue Service.	AIXM 5.1 Core	X	ECAC	
Air Traffic Management Service			A kind of service that provides flight planning and flow management operations.				
	Type		The type of air traffic flow management service provided (Note: Including OTHER: ASM).	AIXM 5.1 Core		ECAC	
	Client Airspace		The Airspace for which the flight planning and air traffic management service is provided.	AIXM 5.1 Core		ECAC	
	Client Route		The route protion for which the flight ploanning and air traffic flow management services is provided.	AIXM 5.1 Core		ECAC	
	Service Operational Status		The operational status of the Search Rescue Service.	AIXM 5.1 Core		ECAC	
Ground Traffic Control Service			A kind of service that provides control and separation services, to aircraft at the airport.				
	Radar Assisted		A code indicating if the service is provided with radar assistance.	AIXM 5.1 Core		ECAC	

	Data Link Enabled		Indicates if Controller-Pilot Data-Link Communication (CPDLC) is available in support of the service.	AIXM 5.1 Core		ECAC	
	Data Link Channel		The channel on which the data-link takes place, if applicable.	AIXM 5.1 Core		ECAC	
	Type		The type of ground traffic control service provided.	AIXM 5.1 Core		ECAC	
	Client Airport		The Airport/Heliport where the surface traffic control service is provided.	AIXM 5.1 Core		ECAC	
	Service Operational Status		The operational status of the Search Rescue Service.	AIXM 5.1 Core		ECAC	
Search 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.				
	Type		The type of air traffic flow management service provided.	AIXM 5.1 Core		ENV_EXTR	
	Client Airspace		The airspace where the search and rescue service is available.	AIXM 5.1 Core		ENV_EXTR	
	Client Route		The route where the search and rescue service is provided.	AIXM 5.1 Core		ECAC	
	Service Operational Status		The operational status of the Search Rescue Service.	AIXM 5.1 Core		ECAC	
Pilot Controlled Lighting			Service providing airborne control of lights by keying the aircraft's microphone. Often available at locations without specified hours for lighting and where there is no control tower or Flight Service Station (FSS); or when the tower or FSS is closed (locations with part-time tower or FSS).				
	Type		Type of pilot controlled lighting service - standard or non-standard.	AIXM 5.1 Core		ECAC	
	Duration		The length of time the lighting is illuminated, normally 15 minutes.	AIXM 5.1 Core		ECAC	
	Intensity Steps		The number of intensity steps/levels for a particular type of lighting system.	AIXM 5.1 Core		ECAC	
	Stand By Intensity		The intensity step/level of the lighting system when not in use.	AIXM 5.1 Core		ECAC	
	Radio Frequency		The radio frequency to be used by the pilot for the activation of the system.	AIXM 5.1 Core		ECAC	
	Activation Instruction		Operational instructions for controlling the lighting systems.	AIXM 5.1 Core		ECAC	
	Controlled Light Intensity		The characteristics of the lighting system (intensity, number of clicks required to activate/deactivate the system).	AIXM 5.1 Core		ECAC	
	Activated Ground Lighting		The lighting system on the ground that may be remotely activated by the pilot.	AIXM 5.1 Core		ECAC	
3. Operational Hours							
Operational Hours			Detailed description of the hours of operation of services at the aerodrome.				
	Aerodrome Operator		The hours of operation and location of services	AIXM 5.1 Core	X	ENV_EXTR+ ECAC	
	Customs and Immigration		The hours of operation and location of services	AIXM 5.1 Core	X	ENV_EXTR+ ECAC	
	Health and Sanitation		The hours of operation and location of services	AIXM 5.1 Core		ENV_EXTR+ ECAC	
	Search Rescue Service		The hours of operation and location of services	AIXM 5.1 Core	X	ENV_EXTR+ ECAC	
	AIS Briefing Office		The hours of operation and location of services	AIXM 5.1 Core		ENV_EXTR+ ECAC	
	ATS Reporting Office		The hours of operation and location of services	AIXM 5.1 Core		ENV_EXTR+ ECAC	
	MET Briefing Office		The hours of operation and location of services	AIXM 5.1 Core		ENV_EXTR+ ECAC	
	Air Traffic Service		The hours of operation and location of services	AIXM 5.1 Core	X	ENV_EXTR+ ECAC	
	Fuelling		The hours of operation and location of services	AIXM 5.1 Core		ENV_EXTR+ ECAC	
	Handling		The hours of operation and location of services	AIXM 5.1 Core		ENV_EXTR+ ECAC	
	Security		The hours of operation and location of services	AIXM 5.1 Core		ENV_EXTR+ ECAC	
	De-Icing		The hours of operation and location of services	AIXM 5.1 Core		ENV_EXTR+ ECAC	

Communication Facilities							
Communication Facility (Radio Communication Channe)			A radio frequency band of sufficient width and associated identification data used for one- or two-way communication from or to a transmitter on the ground or in the air.				
	Service Designation		A code indicating the role of the communication channel, in terms of primary, alternate, emergency, etc.	AIXM 5.1 Core	X	ECAC	
	Channel		The identifier of the radio channel on which the communication takes place.	AIXM 5.1 Core	X	ECAC	
	Logon Address		A specified code used for data link, such as used for logon to an ATS unit.	AIXM 5.1 Core	X	ECAC	
	Callsign Detail		Information about the operational identifier by which the provider of the service is called and the language used.				
		Call Sign	The full textual service provider identification or call-sign for a particular frequency. For example, Athinai Control, Malmoe Radar, etc.	AIXM 5.1 Core	X	ECAC	
		Language	A code indicating the language in which the service is provided on a particular frequency, as associated with a particular call-sign.	AIXM 5.1 Core	X	ECAC	
	Radio Communic. Operational Status		The operational status of the Communication Facility (Operational hours of the station serving the unit).	AIXM 5.1 Core	X	ECAC	

Subject	Property	Sub-Property	Description	Modelling Reference	Annex 15 IOP Data	Minimum Geographical Coverage	Remark
SURVEILLANCE							
Surveillance							
Radar System			One or more Radar Equipment providing radar services.				
	Type		Defines the type of service for the Radar System.	AIXM 5.1 Core		ECAC	
	Model		Model of the equipment (ASR-11, etc).	AIXM 5.1 Core		ECAC	
	General Terrain Monitor		General Terrain Monitors (GTM) monitor aircraft clearance above the highest terrain and obstacles in a general area.	AIXM 5.1 Core		ECAC	
	Broadcast Identifier		The Identifier broadcasted for a Secondary Radar.	AIXM 5.1 Core		ECAC	
	Office		The office responsible for the equipment.	AIXM 5.1 Core		ECAC	
	Aerodrome/Heliport		The Aerodrome or Heliport on which the equipment is located.	AIXM 5.1 Core		ECAC	
	PAR Runway		A choice of Runway or AerodromeHeliport.	AIXM 5.1 Core		ECAC	
	Location		Graphical location of the radar (system). This should be the same location as the equipment that provides navigability.	AIXM 5.1 Core		ECAC	
	Vertical Coverage Altitude		Altitude for which the Radar provides vertical coverage.	AIXM 5.1 Core		ECAC	
	Vertical Coverage Distance		Distance for which the Radar provides vertical coverage.	AIXM 5.1 Core		ECAC	
	Vertical Coverage Azimuth		Azimuth for which the Radar provides vertical coverage.	AIXM 5.1 Core		ECAC	
	Antenna Tilt Fixed		Indicates whether the antenna tilt is Variable or Fixed.	AIXM 5.1 Core		ECAC	
	Tilt Angle		Angle at which the antenna is tilted.	AIXM 5.1 Core		ECAC	
	Automated Radar Terminal System		The Automated Radar Terminal System (ARTS) is a system in the air traffic control system using radar intelligence to detect and display pertinent data such as flight identification, altitude, and position of aircraft operating in the terminal area. A Radar with this attribute automatically tracks controlled aircraft and presents alpha-numeric information adjacent to their targets. It may even automatically calculate the separation between different aircrafts and provide an alert if that separation is compromised as per the set standards.	AIXM 5.1 Core		ECAC	
	Ground Station		The gorund station where the Radar Scope is utilized.	AIXM 5.1 Core		ECAC	
	Precision Approach Radar		Primary radar equipment used to determine the position of an aircraft during final approach, in terms of lateral and vertical deviations relative to a nominal approach path, and in range relative to touchdown.				
		Precision Approach Radar Type	Denotes the type of Precision Approach Radar.	AIXM 5.1 Core		ECAC	
		Slope	The glideslope angle at which the PAR provides landing assistance.	AIXM 5.1 Core		ECAC	
		Slope Accuracy	The accuracy of the glideslope angle at which the PAR provides landing assistance.	AIXM 5.1 Core		ECAC	
		Reflector	The Reflector used with a PAR.	AIXM 5.1 Core		ECAC	
	Primary Surveillance Radar		Primary Surveillance Radar is a radar system which detects the position of all the objects within its coverage that can reflect its transmitted radio signals.				
		Type	Defines the type of Primary Surveillance Radar (i.e. ASR or ARSR).	AIXM 5.1 Core		ECAC	

	Secondary Surveillance Radar		Secondary Surveillance Radar (SSR) is a radar system in which the object to be detected is fitted with the cooperative equipment in the form of a radio receiver/transmitter (transponder). Radar pulses transmitted from the searching transmitter/receiver (interrogator) site are received in the cooperative equipment and used to trigger a distinctive transmission from the transponder. This reply transmission, rather than a reflected signal, is then received back at the transmitter/receiver site for processing and display at an air traffic control facility.				
		Transponder	Mode S, or mode select, despite also being called a transponder radar system replacement for Air Traffic Control Radar Beacon System (ATCRBS), is actually a data packet protocol which can be used to augment ATCRBS transponder positioning equipment (radar and TCAS). Mode S is designed to fully interface with ATCRBS systems: mode S SSRs can interrogate ATCRBS transponders, and AIS-P transponders will also reply to older ATCRBS and TCAS interrogations.	AIXM 5.1 Core		ECAC	
		Autonomous	Indicates the SRR is autonomous or independent.	AIXM 5.1 Core		ECAC	
		Monopulse	Monopulse radar is an adaptation of conical scanning radar which sends additional information in the radar signal in order to avoid problems caused by rapid changes in signal strength. The system also makes jamming more difficult. Most radars designed since the 1960s are monopulse systems.	AIXM 5.1 Core		ECAC	
Radar Equipment			Physical radar equipment like PAR, ARSR, ASR, SECRA, etc..				
	Name		Textual name of the equipment.	AIXM 5.1 Core		ECAC	
	Serial Number		Serial number of the equipment.	AIXM 5.1 Core		ECAC	
	Range		The applicable range of the equipment to detect aircraft.	AIXM 5.1 Core		ECAC	
	Range Accuracy		Accuracy of the applicable range of the equipment to detect aircraft.	AIXM 5.1 Core		ECAC	
	Dual Channel		Indicates whether the component has dual frequency.	AIXM 5.1 Core		ECAC	
	Moving Target Indicator		Indicates whether a Moving Target Indicator (MTI) is available for the component. The MTI function eliminates ground clutter.	AIXM 5.1 Core		ECAC	
	Standby Power		Indicates how the component is powered if the primary power fails.	AIXM 5.1 Core		ECAC	
	Digital		Indicates if the radar equipment is digital or analogue.	AIXM 5.1 Core		ECAC	
	Military Use Only		Indicates the equipment is for military use only.	AIXM 5.1 Core		ECAC	
	Special Use Only		Indicates the equipment is for special use procedures only such as Helipads, etc.	AIXM 5.1 Core		ECAC	
	Special Aircraft Only		Indicates the equipment is to be only used for certain type of aircraft that are capable of using it. In some instances, the slope angle or procedure can only be flown by high performance aircraft.	AIXM 5.1 Core		ECAC	
	Magnetic Variation		The angular difference between True North and Magnetic North measured at a given position and date.	AIXM 5.1 Core		ECAC	
	Magnetic Variation Accuracy		Accuracy of the magnetic variation.	AIXM 5.1 Core		ECAC	
	Date Magnetic Variation		The date on which the magnetic variation had this value.	AIXM 5.1 Core		ECAC	
	Contact		The contact information of the group or individual associated with the Radar Equipment.	AIXM 5.1 Core		ECAC	
	Location		The graphical location of the component.	AIXM 5.1 Core		ECAC	

Subject	Property	Sub-Property	Description	Modelling Reference	Annex 15 IOP Data	Minimum Geographical Coverage	Remark
EVENT							
Event Concept							
Event			Defined as “an operational situation that results in the temporary or permanent change of the properties of one or more aeronautical information features”.				
	Name		An optional title or designation by which the event is known to people involved in aeronautical operations.	Event Extension	X	World Wide	
	Encoding		An indication of the extent by which the event information is provided as digital data versus free text notes and which can take the following values: DIGITAL = the information is digitally structured to the maximum possible extent allowed by the AIXM model. MIXED = the information is partially digitally structured. Some information is provided as a free text in the summary and eventual annotations associated with the feature and properties concerned. ANNOTATION = the information is provided as free text in the summary and eventual annotations associated with the feature and properties concerned. NOTAM = The Event includes just the text NOTAM and eventually the associations with the concerned FIR/Aerodrome/Heliport.	Event Extension	X	World Wide	
	Scenario		The identifier of a pre-defined scenario that provides the data encoding rules for a specific operational situation.	Event Extension	X	World Wide	
	Version		The version of the pre-defined coding scenario (usually the version of the document that contains the scenario).	Event Extension	X	World Wide	
	Revision		The most recent date and time when the information encoded in the Event was updated.	Event Extension	X	World Wide	
	Activity		A short indication of the type of activity or operational situation that makes the event.	Event Extension	X	World Wide	
	Summary		A descriptive summary of the event, with the possibility to include maps and formatted text.	Event Extension	X	World Wide	
	NOTAM		A NOTAM is issued to notify information of a temporary nature and of short duration, or when operationally significant information is permanently changed, or temporary changes of long duration are made at short notice, except for extensive text and/or graphics.				
		Series	The use of a NOTAM Series identifier is always required, even for countries publishing only one single NOTAM Series. Letters A to Z (1 character) are allowed, except S and T.	Event Extension	X	World Wide	
		Number	Consists of NOTAM number (4 digits). Each series shall start on January 1st of each year with number 0001.	Event Extension	X	World Wide	
		Year	Consists of NOTAM year (2 digits). Each series shall start on January 1st of each year with number 0001.	Event Extension	X	World Wide	
		Type	Letters ‘N’ (new), ‘R’ (replace) and ‘C’ (cancel) are added as a suffix to the designator ‘NOTAM’ to indicate the NOTAM type or function.	Event Extension	X	World Wide	
		Issued	The NOTAM are issued in ascending and continuous sequence in each and every series.	Event Extension	X	World Wide	
		Referred Series	The reference to the NOTAM series which would be canceled/replaced.	Event Extension	X	World Wide	
		Referred Number	The reference to the NOTAM number which would be canceled/replaced.	Event Extension	X	World Wide	
		Referred Year	The reference to the NOTAM year which would be canceled/replaced.	Event Extension	X	World Wide	
		Affected FIR	This Item shall normally contain the ICAO location indicator of the FIR within which the subject of the information is located geographically.	Event Extension	X	World Wide	

Selection Code	This Item shall contain the ICAO Doc 8126 (Ref. [2]) rationalised versions of NOTAM Codes published in ICAO Doc 8400 (Ref. [3]. The NOTAM Selection Criteria (NSC) set out in ICAO Doc 8126 provide a subject-related association of NOTAM Codes with the qualifiers ‘Traffic’, ‘Purpose’ and ‘Scope’.	Event Extension	X	World Wide	
Traffic	This qualifier relates the NOTAM to a type of traffic and thus allows retrieval according to the user requirements: I = IFR Traffic; V = VFR Traffic; IV = IFR and VFR Traffic; K = NOTAM is a checklist.	Event Extension	X	World Wide	
Purpose	This qualifier relates a NOTAM to certain purposes (intentions) and thus allows retrieval according to the user's requirements. The appropriate ‘Purpose’ qualifier(s) should be taken from the NSC. Consider the impact on the purpose when selecting the NOTAM code. The following entries and combinations are allowed: K, M, B, BO and NBO, where the order in the list reflects the grading in terms of operational significance from the lowest to the highest. Refrain from up- or downgrading the ICAO classification in NOTAM publication. For a NOTAM Checklist, only K shall be used.	Event Extension	X	World Wide	
Scope	This qualifier relates the NOTAM subject (2nd and 3rd letters) to a specific scope. This qualifier is used to determine under which category a NOTAM is presented in a Pre-flight Information Bulletin, i.e. under ‘Aerodrome’, ‘En-route’ or ‘Navigation Warning’. The ICAO NOTAM Selection Criteria provide some guidance for selecting the scope but do not provide guidance if combinations such as ‘AE’ are intended as either/or, or as both. General rules are provided in OPADD on the application of scopes ‘A’, ‘E’ and ‘W’ in 2.3.9.3 and more details for scopes ‘AE’ and ‘AW’ are provided in 2.3.9.5.	Event Extension	X	World Wide	
Minimum FL	These qualifiers relate a NOTAM to a vertical section of airspace by reference to specific lower limit. The limit specified in these qualifiers are given as ‘flight levels’ only. Example: ‘Q) …/090/330/…’ = from ‘Lower’ FL090 up to ‘Upper’ FL330.	Event Extension	X	World Wide	
Maximum FL	These qualifiers relate a NOTAM to a vertical section of airspace by reference to specific upper limit. The limits specified in these qualifiers are given as ‘flight levels’ only. Example: ‘Q) …/090/330/…’ = from ‘Lower’ FL090 up to ‘Upper’ FL330.	Event Extension	X	World Wide	
Coordinates	The first element of the GEOGRAPHICAL REFERENCE Qualifier contains one set of co-ordinates comprising 11 characters rounded up or down to the nearest minute; i.e. Latitude (N/S) in 5 characters; Longitude (E/W) in 6 characters.	Event Extension	X	World Wide	
Radius	The second element of the GEOGRAPHICAL REFERENCE Qualifier contains a radius of influence comprising three figures rounded up to the next higher whole Nautical Mile encompassing the total area of influence measured from the rounded coordinate: e.g. 10.2NM shall be indicated as 011.	Event Extension	X	World Wide	
Location	Item A) - Single/Multi Location (FIR or AD) indicator.	Event Extension	X	World Wide	
Effective Start	Item B) A ten-digit date-time group giving the year, month, day, hour and minutes at which the NOTAM comes into force.	Event Extension	X	World Wide	
Effective End	Item C) For NOTAM of a known duration of validity, a ten-digit date-time group giving the year, month, day, hour and minute at which the NOTAM ceases to be in force and becomes invalid. This date and time shall be later than that given in Item B).	Event Extension	X	World Wide	

		Schedule	Item D) This Item needs to be inserted only when the information contained in a NOTAM is relevant for users only at certain periods within the overall 'in force' period, i.e. between the dates and times given in Items B) and C). In these cases, Item D) will detail the actual periods of activation with the exception referred to in paragraph OPADD 2.3.18.20.	Event Extension	X	World Wide	
		Text	Item E) is free text in plain language and shall not contain NOTAM Code.	Event Extension	X	World Wide	
		Lower Limit	Items F) shall contain an altitude (Above Mean Sea Level – AMSL) or a height (Above Ground or Sea or Surface Level – AGL) expressed in meters or feet, or a Flight Level (always expressed in 3 digits). In addition, SFC and GND shall be used in Item F) to designate surface and ground respectively.	Event Extension	X	World Wide	
		Upper Limit	Items G) shall contain an altitude (Above Mean Sea Level – AMSL) or a height (Above Ground or Sea or Surface Level – AGL) expressed in meters or feet, or a Flight Level (always expressed in 3 digits). In addition, UNL shall be used in Item G) to designate unlimited.	Event Extension	X	World Wide	
	AIS Publication		AIS publication is a fixed set of document types such as AIP (containing a specific section of AIP), AIP Amendment, AIP Supplement, AIC etc.				
		Type	The type of the document (e.g. AIP, AIC, SUP, etc.).	Event Extension		ECAC	
		Series	Series of an AIC document. The Series consists of a single uppercase character. The use of a Series is recommended.	Event Extension		ECAC	
		Number	The number related to a version. The correct format is: NNN, e.g. 005.	Event Extension		ECAC	
		Year	The year related to a version. The correct format is: YYYY, e.g. 2015.	Event Extension		ECAC	
		Issued	The publication date of the document.	Event Extension		ECAC	
		Effective Start	The date when a version becomes effective (i.e. starts to be valid).	Event Extension		ECAC	
		Effective End	The date when the document is no longer effective (i.e. becomes invalid).	Event Extension		ECAC	
		Content	The actual content of the AIS Publication in XHTML format.	Event Extension		ECAC	

Subject	Property	Sub-Property	Description	Modelling Reference	Annex 15 IOP Data	Minimum Geographical Coverage	Remark
AIRCRAFT TYPE CHARACTERISTICS and PERFORMANCE							
BASE OF AIRCRAFT DATA - BADA FAMILY 3							
Aircraft Performance			Aircraft Performance data.				
	Aircraft Code		This field identifies the aircraft type. It consists of a three or four-character ICAO code.	None		All available BADA aircraft types	
	Temperature Data		The temperature deviation from ISA conditions.	None			
	Maximum Flight Level		This value corresponds to the maximum cruising Flight Level of an Aircraft type (also called the ceiling).	None			
	Mass Levels		The three Mass Levels (Low, Nominal and High) are expressed in kilograms (kg) and correspond to the reference masses used to calculate the values for Cruise Fuel and Climbing Rate of the performance table.	None			
	Aircraft Performance Table		The performance table defines for a number of Flight Level ranges for the cruise, climb and descent parameters to be used by client systems for their profile calculations.				
		Cruise parameters	Cruise Speed, Low Cruise Fuel, Nominal Cruise Fuel, High Cruise Fuel.	None		All available BADA aircraft types	
		Climb parameters	Climbing Speed, Low Climbing Rate, Nominal Climbing Rate, High Climbing Rate, Climb Fuel.	None			
		Descent parameters	Descent Speed, Descent Rate, Descent Fuel.	None			
BADA Synonyms			lists all aircraft types supported by the BADA revision. All supported aircraft are listed alphabetically in the file whether they are supported directly (-) or by equivalence (*).				
	Aircraft Code		This field identifies the aircraft type. It consists of a three or four-character ICAO code.	None		All available BADA aircraft types	
	Manufacturer		This field identifies the manufacturer of the aircraft. Examples are Boeing, Airbus or Fokker.	None			
	Model Name		This field identifies the name or model for the aircraft type. Examples are the 747-400 series or Learjet 35.	None			
	File		Indicates the name of the OPF, APF, PTF or PTD file, which contains the parameters for the aircraft type (minus the file extension).	None			
	ICAO		indicates whether the designator for this aircraft type is in use according to ICAO Doc 8643 (value “Y”) or not (value “N”).	None			
Operations Performance Model			The aircraft model in terms of the eight categories: aircraft type, mass, flight envelope, aerodynamics, engine thrust, reduced power, fuel consumption, ground movement.				
	Aircraft Type		Three values are specified for aircraft type, these being the number of engines, the engine type and the wake category.			All available BADA aircraft types	
		Aircraft Code	This field identifies the aircraft type. It consists of a three or four-character ICAO code.	None			
		Manufacturer	This field identifies the manufacturer of the aircraft. Examples are Boeing, Airbus or Fokker.	None			
		Model Name	This field identifies the name or model for the aircraft type. Examples are the 747-400 series or Learjet 35.	None			
		n_{eng}	Number of engines.	None			
		Engine Type	The engine type can be one of three values: Jet, Turboprop or Piston.	None			
		Wake Category	The wake category can also be one of four values: J: jumbo, H: heavy, M: medium, L: light.	None			
	Mass		Four mass values are specified for each aircraft in tonnes.				
		m_{ref}	Reference mass (Note: nominal mass level).	None			
		m_{min}	Minimum mass (Note: low mass level = $1.2m_{min}$).	None			
		m_{max}	Maximum mass (Note: high mass level).	None			

	m_{pyld}	Maximum payload mass.	None		
Flight Envelope		The maximum speed and altitude for an aircraft are expressed in terms of the following six parameters.			
	V_{MO}	Maximum operating speed.	None		
	M_{MO}	Maximum operating Mach number.	None		
	h_{MO}	Maximum operating altitude (Maximum Flight Level - this value corresponds to the maximum cruising Flight Level of an Aircraft type).	None		
	h_{max}	Maximum altitude at Maximum Take-off Weight and International Standard Atmosphere (MTOW and ISA).	None		
	G_w	Weight gradient on maximum altitude.	None		
	G_t	Temperature gradient on maximum altitude.	None		
Aerodynamics		Coefficients for the specification of drag, and low speed buffeting limit (jet aircraft only).			
	S	Reference wing surface area.	None		
	$C_{D0,CR}$	Parasitic drag coefficient (cruise).	None		
	$C_{D2,CR}$	Induced drag coefficient (cruise).	None		
	$C_{D0,AP}$	Parasitic drag coefficient (approach).	None		
	$C_{D2,AP}$	Induced drag coefficient (approach).	None		
	$C_{D0,LD}$	Parasitic drag coefficient (landing).	None		
	$C_{D2,LD}$	Induced drag coefficient (landing).	None		
	$C_{D0,DLDG}$	Parasite drag coefficient (landing gear).	None		
	$(V_{stall})_i$	Five different configurations are specified with a stall speed: [take-off, initial climb, cruise (clean), approach, landing]	None		
	$C_{Lbo\ (M=0)}$	Buffet onset lift coefficient (jet only).	None		
	K	Buffeting gradient (jet only).	None		
Engine Thrust		Coefficients that allow the calculation of the following thrust levels: maximum climb and take-off, maximum cruise, descent.			
	$C_{Tc,1}$	1st maximum climb thrust coefficient.	None		
	$C_{Tc,2}$	2nd maximum climb thrust coefficient.	None		
	$C_{Tc,3}$	3rd maximum climb thrust coefficient.	None		
	$C_{Tc,4}$	1st thrust temperature coefficient.	None		
	$C_{Tc,5}$	2nd thrust temperature coefficient.	None		
	$C_{Tdes,low}$	Low altitude descent thrust coefficient.	None		
	$C_{Tdes,high}$	High altitude descent thrust coefficient.	None		
	$H_{p,des}$	Transition altitude for calculation of descent thrust.	None		
	$C_{Tdes,app}$	Approach thrust coefficient.	None		
	$C_{Tdes,ld}$	Landing thrust coefficient.	None		
	$V_{des,ref}$	Reference descent speed (CAS).	None		
	$M_{des,ref}$	Reference descent Mach number.	None		
Fuel Flow		Jet and Turboprop Engines: nominal fuel flow, minimum fuel flow, cruise fuel flow. Piston Engines: minimum fuel flow, cruise fuel flow.			
	C_{f1}	1st thrust specific fuel consumption coefficient.	None		
	C_{f2}	2nd thrust specific fuel consumption coefficient.	None		
	C_{f3}	1st descent fuel flow coefficient.	None		
	C_{f4}	2nd descent fuel flow coefficient.	None		

		C_{fcr}	Cruise fuel flow correction coefficient.	None			
	Ground Movement		Four values are specified that can be of use when simulating ground movements. Note that currently the value of the MLW is not provided in BADA.				
		TOL	FAR Take-Off Length [m] with Maximum Take-off Weight on a dry, hard, level runway under ISA conditions and no wind.	None			
		LDL	FAR Landing Length [m] with Maximum Landing Weight on a dry, hard, level runway under ISA conditions and no wind.	None			
		Span	Aircraft wingspan.	None			
		Length	Aircraft ength.	None			
Airline Procedure Model			The airline procedure model is provided for three separate flight phases: climb, cruise and descent. For each of these phases and each aircraft model, the airline procedure model requires the following information to determine aircraft speed schedule.				
	Company Name		Name of an Aircraft Operator. All asterisks identify the default one, to be used when there is not any performance information about the identified Aircraft (Type) Pattern for a particular aircraft operator.	None		All available BADA aircraft types	
	CLIMB		The following parameters are defined for each aircraft type to characterise the climb phase.				
		$V_{cl,1}$	Standard climb CAS [knots] between 1,500/6,000 and 10,000 ft.	None			
		$V_{cl,2}$	Standard climb CAS [knots] between 10,000 ft and Mach transition altitude.	None			
		M_{cl}	Standard climb Mach number above Mach transition altitude.	None			
	CRUISE		The following parameters are defined for each aircraft type to characterise the cruise phase.				
		$V_{cr,1}$	Standard cruise CAS [knots] between 3,000 and 10,000 ft.	None			
		$V_{cr,2}$	Standard cruise CAS [knots] between 10,000 ft and Mach transition altitude.	None			
		M_{cr}	Standard cruise Mach number above Mach transition altitude.	None			
	DESCENT		The following parameters are defined for each aircraft type to characterise the descent phase.				
		$V_{des,1}$	Standard descent CAS [knots] between 3,000/6,000 and 10,000 ft.	None			
		$V_{des,2}$	Standard descent CAS [knots] between 10,000 ft and Mach transition altitude.	None			
		M_{des}	Standard descent Mach number above Mach transition altitude.	None			
Global Aircraft Parameters			A number of parameters that have been described in Operations Performance Model and Airline Procedure Model have values that are independent of the aircraft type or model for which they are used. The values of these and other parameters which have general use have been put in the Global Parameters File. This increases the flexibility and allows an easier evaluation of the values that are used.				
	Maximum Acceleration		Maximum longitudinal and normal acceleration for civil flights.	None		All available BADA aircraft types	
	Bank Angles		Nominal bank angles for civil flight during TO/LND and all other phases, Nominal bank angles for military flight (all phases). Maximum bank angles for civil flight during TO/LND/HOLD and all other phases, Maximum bank angles for military flight (all phases).	None			
	Expedited Descent		Expedited descent factor.	None			
	Thrust Factors		Take-off thrust coefficient, Maximum cruise thrust coefficient.	None			
	Configuration Altitude Threshold		Maximum altitude threshold for take-off/initial climb/approach/landing.	None			

	Minimum Speed Coefficients		Minimum speed coefficient for take-off and coefficient (all other phases).	None			
	Speed Schedules		Climb speed increment below 1500 ft/3000 ft)/4000 ft/5000 ft/6000 ft (jet). Climb speed increment below 500 ft/1000 ft/1500 ft (turbo/piston). Descent speed increment below 1000 ft/1500 ft/2000 ft/3000 ft (jet/turboprop). Descent speed increment below 500/1000/1500 ft (piston).	None			
	Holding Speeds		Holding speed below FL140, Holding speed between FL140 and FL200, Holding speed between FL200 and FL340, Holding speed above FL340 [Mach].	None			
	Ground Speeds		Runway backtrack speed, Taxi speed, Apron speed, Gate speed.	None			
	Reduced Power Coefficient		Maximum reduction in power for turboprops, Maximum reduction in power for pistons, Maximum reduction in power for jets.	None			
	Flight Phase		It indicates the aircraft's flight phase, containing one of the following abbreviations: TO – Take Off IC – Initial Climb CL – Climb CR – Cruise DES – Descent HOLD – Holding APP – Approach LND – Landing GND - Ground	None			
	Engine Type		It indicates the Type of Engines held by the aircraft (jet = jet engine, turbo = turboprop engine, piston = piston engine).	None			
BASE OF AIRCRAFT DATA - BADA FAMILY 4							
Aircraft Performance			Aircraft Performance data.				
	Aircraft Type Designator		This field identifies the aircraft type. It consists of a three or four-character ICAO code.	None		All available BADA aircraft types	
	Temperature Data		The temperature deviation from ISA conditions.	None			
	Maximum Flight Level		This value corresponds to the maximum cruising Flight Level of an Aircraft type (also called the ceiling).	None			
	Mass Levels		The three Mass Levels (Low, Nominal and High) are expressed in kilograms (kg) and correspond to the reference masses used to calculate the values for Cruise Fuel and Climbing Rate of the performance table.	None			
	Aircraft Performance Table		The performance table defines for a number of Flight Level ranges for the cruise, climb and descent parameters to be used by client systems for their profile calculations.				
		Cruise parameters	Cruise Speed, Low Cruise Fuel, Nominal Cruise Fuel, High Cruise Fuel.	None		All available BADA aircraft types	
		Climb parameters	Climbing Speed, Low Climbing Rate, Nominal Climbing Rate, High Climbing Rate, Climb Fuel.	None			
		Descent parameters	Descent Speed, Low Descent Rate, Nominal Descent Rate, Hig Descent Rate, Descent Fuel.	None			
Aircraft Model Performance Parameters			A summary of the parameters specified for each BADA Family 4 model. Location of each parameter in the XML file (the Aircraft Model file (ACM) for a particular aircraft type) is indicated, together with the symbol used to represent this parameter in the BADA expressions where it appears (if any).				
	ACM\model		Name of the aircraft model.	None		All available BADA aircraft types	
	ACM\type		Engine type (Jet, Turboprop or Piston).	None			
	ACM\engine		Engine name.	None			
	ACM\description		Additional information on the model.	None			
	ICAO Information		Both the ICAO designator and WTC are provided for each BADA model.				

	ACM\ICAO\ designator	Aircraft type designator.	None		
	ACM\ICAO\WTC	Wake turbulence category (J, H, M or L).	None		
AFCM (Aerodynamic Forces and Configurations Model)		Describes the aerodynamic forces and the possible aircraft aerodynamic configurations.			
	ACM\AFCM\S	Wing reference area.	None		
	ACM\AFCM\Configuration	Identifier of the high-lift devices configuration.	None		
	ACM\AFCM\Configuratio\ HLPosition	Position of the high-lift devices.	None		
	ACM\AFCM\Configuratio\ name	Name of the high-lift devices configuration.	None		
	ACM\AFCM\Configuration\LGUP\DPM_clean\CD_clean	Clean drag model coefficients.	None		
	ACM\AFCM\Configuration\LGUP\DPM_clean\scalar	Clean drag model scaling factor.	None		
	ACM\AFCM\Configuration\LGUP\DPM_clean\M_max	Highest Mach number used for identification.	None		
	ACM\AFCM\Configuration\LG[UP|DN]\DPM_nonclean\CD_nonclean	Non-clean drag model coefficients.	None		
OPM (Operation of configuration Parameters Model)		Defines the valid fixed positions and transition times for any configuration parameter, and it is applicable to both the high-lift devices and the landing gear configuration parameters.			
	ACM\OPM\HLO\Transition\ from	Identifier of the initial high-lift devices configuration.	None		
	ACM\OPM\HLO\Transition\ to	Identifier of the final high-lift devices configuration.	None		
	ACM\OPM\HLO\Transition\ time	Transition time from initial to final high-lift devices configuration.	None		
	ACM\OPM\LGO\Transition\ from	Identifier of the initial landing gear configuration.	None		
	ACM\OPM\LGO\Transition\ to	Identifier of the final landing gear configuration.	None		
	ACM\OPM\LGO\Transition\ time	Transition time from initial to final landing gear configuration.	None		
PFM (Propulsive Forces Model)		The BADA Family 4 model provides three separate thrust models as part of the Propulsive Forces Model (PFM), depending on the type of engine: turbofan: TurboFan Model (TFM), turboprop: TurboProp Model (TPM), piston: Piston Engine Model (PEM).			
	ACM\PFM\LHV	Fuel lower heating value.	None		
	ACM\PFM\MREF	Reference mass.	None		
	ACM\PFM\rho	Fuel density.	None		
	ACM\PFM\n_eng	Number of engines.	None		
	ACM\PFM\TFA	Taxi fuel allowance (all engines).	None		
TFM (Turbo Fan Model)		A turbofan engine may be operated either by direct control of the throttle, or through the use of predefined settings, called ratings.			
	ACM\PFM\TFM\LIDL\CT	Turbofan idle rating thrust coefficients.	None		

	ACM\PFM\TFM\LIDL\CF	Turbofan idle rating fuel coefficients.	None		
	ACM\PFM\TFM\CT	Turbofan non-idle rating thrust coefficients.	None		
	ACM\PFM\TFM\CF	Turbofan non-idle rating fuel coefficients.	None		
	ACM\PFM\TFM\M[CMB|CRZ|TKF]\kink	Turbofan kink point.	None		
	ACM\PFM\TFM\M[CMB|CRZ|TKF]\flat_rating	Turbofan flat-rated area throttle coefficients.	None		
	ACM\PFM\TFM\M[CMB|CRZ|TKF]\temp_rating	Turbofan temperature-rated area throttle coefficients.	None		
	ACM\PFM\TFM\throttle\ low	Turbofan low throttle parameter.	None		
	ACM\PFM\TFM\throttle\ high	Turbofan high throttle parameter.	None		
TPM (Turbo Prop Model)		A turboprop engine may be operated either by direct control of the throttle, or through the use of predefined settings, called ratings.			
	ACM\PFM\TPM\LIDL\CT	Turboprop idle rating thrust coefficients.	None		
	ACM\PFM\TPM\LIDL\CF	Turboprop idle rating fuel coefficients.	None		
	ACM\PFM\TPM\CP	Turboprop non-idle rating power coefficients.	None		
	ACM\PFM\TPM\CF	Turboprop non-idle rating fuel coefficients.	None		
	ACM\PFM\TPM\M[CMB|CRZ]\rating	Turboprop non-idle rating throttle coefficients.	None		
	ACM\PFM\TPM\M[CMB|CRZ]\max_power	Maximum all-engine power.	None		
	ACM\PFM\TPM\max_eff	Maximum empirical efficiency of the propeller.	None		
	ACM\PFM\TPM\prop_dia	Propeller diameter.	None		
	ACM\PFM\TPM\throttle\ low	Turboprop low throttle parameter.	None		
	ACM\PFM\TPM\throttle\ high	Turboprop high throttle parameter.	None		
PEM (Piston Engine Model)		A piston engine is usually operated by direct control of the throttle, so the notion of rating will be briefly introduced only for the sake of consistency with the turbofan and turboprop thrust models.			
	ACM\PFM\PEM\P	Maximum one-engine power in standard atmosphere at MSL.	None		
	ACM\PFM\PEM\Hd_turbo	Maximum density altitude at which the turbocharger can maintain the sea level admission pressure.	None		
	ACM\PFM\PEM\max_eff	Maximum empirical efficiency of the propeller.	None		
	ACM\PFM\PEM\prop_dia	Propeller diameter.	None		
	ACM\PFM\PEM\CPSFC	Power-specific fuel consumption.	None		
GLM (Geometric Limitations Model)		The Geometric Limitations Model (GLM) contains the maximum geopotential pressure altitude for which the aircraft is certified.			
	ACM\ALM\GLM\hmo	Maximum operating altitude.	None		
	ACM\ALM\GLM\mfa	Maximum altitude with high-lift devices extended.	None		

KLM (Kinematic Limitations Model)		The Kinematic Limitations Model (KLM) contains the maximum calibrated airspeed $V_{CAS,max}$ and Mach number M_{max} for which the aircraft is certified. In general, they depend on the aerodynamic configuration.			
	ACM\ALM\KLM\mmo	Maximum operating Mach number.	None		
	ACM\ALM\KLM\mle	Maximum operating Mach number with landing gear extended.	None		
	ACM\ALM\KLM\mlo	Maximum operating Mach number with landing gear extending or retracting.	None		
	ACM\ALM\KLM\vmo	Maximum operating speed.	None		
	ACM\ACFM\Configurations\vfe	Maximum operating speed with high-lift devices extended.	None		
	ACM\ALM\KLM\vle	Maximum operating speed with landing gear extended.	None		
	ACM\ALM\KLM\vloe	Maximum operating speed with landing gear extending.	None		
	ACM\ALM\KLM\vlor	Maximum operating speed with landing gear retracting.	None		
BLM (Buffet Limitations Model)		The Buffet Limitations Model (BLM) determines the maximum lift coefficient $C_{L,max}$ at which the aircraft can operate, depending on the aircraft aerodynamic configuration.			
	ACM\AFCM\Configurations\LGUP\BLM_clean\CL_clean	Clean configuration buffet coefficients.	None		
	ACM\AFCM\Configurations\LGUP\BLM_clean\CL_Mach0	Maximum lift coefficient at M=0.	None		
	ACM\AFCM\Configurations\LGUP\BLM_clean\Mmin	Lower boundary of the domain of applicability of the clean configuration buffet model.	None		
	ACM\AFCM\Configurations\LGUP\BLM_clean\Mmax	Upper boundary of the domain of applicability of the clean configuration buffet model.	None		
	ACM\AFCM\Configurations\LG[UP|DN]\BLM\CL_max	Maximum lift coefficient.	None		
DLM (Dynamic Limitations Model)		The Dynamic Limitations Model (DLM) contains the minimum and maximum weights allowed by the aircraft, plus the maximum and minimum load factors.			
	ACM\ALM\DLM\MTW	Maximum taxi weight.	None		
	ACM\ALM\DLM\MTOW	Maximum take-off weight.	None		
	ACM\ALM\DLM\MLW	Maximum landing weight.	None		
	ACM\ALM\DLM\MZFW	Maximum zero-fuel weight.	None		
	ACM\ALM\DLM\OEW	operating empty weight.	None		
	ACM\ALM\DLM\MPL	Maximum payload.	None		
	ACM\ALM\DLM\MFL	Maximum fuel load.	None		
	ACM\ALM\DLM\n1	Maximum load factor with high-lift devices retracted.	None		
	ACM\ALM\DLM\n3	Minimum load factor with high-lift devices retracted.	None		
	ACM\ALM\DLM\nf1	Maximum load factor with high-lift devices extended.	None		
	ACM\ALM\DLM\nf3	Minimum load factor with high-lift devices extended.	None		

ELM (Environmental Limitations Model)		The Environmental Limitations Model (ELM) provides the maximum and minimum temperature deviations under which the aircraft can be operated, as a function of geopotential pressure altitude. Two different environmental envelopes are provided, depending on the type of operation: the first one is to be used in flight, and the second one for landing and take-off, where more restrictive limitations are in place.			
	ACM\ALM\ELM\Tmax_f	Maximum temperature deviation in flight.	None		
	ACM\ALM\ELM\Tmax_g	Maximum temperature deviation during take-off and landing.	None		
	ACM\ALM\ELM\Tmin_f	Minimum temperature deviation in flight.	None		
	ACM\ALM\ELM\Tmin_g	Minimum temperature deviation during take-off and landing.	None		
Ground Movement		Four values are specified that can be of use when simulating ground movements.			
	ACM\Ground\Dimensions\ span	Aircraft wingspan.	None		
	ACM\Ground\Dimensions\ length	Aircraft length.	None		
	ACM\Ground\Runway\ TOL	FAR Take-Off Length [m] with MTOW on a dry, hard, level runway under ISA.	None		
	ACM\Ground\Runway\ LDL	FAR Landing Length [m] with MLW on a dry, hard, level runway under ISA conditions and no wind.	None		
ARPM (Airline Procedure Model)		A generic Airline Procedure Model is proposed in BADA: it provides nominal speeds and aerodynamic configurations for different flight phases, assuming normal aircraft operations.			
	ACM\ARPM\AeroConfSchedule\AeroPhase\name	Aerodynamic phase (TO, IC, CR, AP or LD).	None		
	ACM\ARPM\AeroConfSchedule\AeroPhase\Hlid	Aerodynamic configuration identifier.	None		
	ACM\ARPM\AeroConfSchedule\AeroPhase\LG	Landing gear position (UP or DN).	None		
	ACM\ARPM\SpeedScheduleList\SpeedSchedule\CompanyName	Airline company name.	None		
	ACM\ARPM\SpeedScheduleList\SpeedSchedule\SpeedPhase\name	Flight phase (Climb, Cruise or Descent).	None		
	ACM\ARPM\SpeedScheduleList\SpeedSchedule\SpeedPhase\CAS1	CAS to be flown below FL100.	None		
	ACM\ARPM\SpeedScheduleList\SpeedSchedule\ SpeedPhase\CAS2	CAS to be flown between FL100 and crossover altitude.	None		

		ACM\ARPM\SpeedScheduleList\SpeedSchedule\SpeedPhase\Mach	Mach number to be flown above crossover altitude.	None			
Global Aircraft Parameters			A number of parameters that have been described in Operations Performance Model and Airline Procedure Model have values that are independent of the aircraft type or model for which they are used. The values of these and other parameters which have general use have been put in the Global Parameters File. This increases the flexibility and allows an easier evaluation of the values that are used.				
	Configuration Altitude Threshold		Maximum altitude threshold for take-off/initial climb/approach/landing.	None		All available BADA aircraft types	
	Minimum Speed Coefficients		Minimum speed coefficient for take-off and coefficient (all other phases).	None			
	Speed Schedules		Climb speed increment below 1500 ft/3000 ft)/4000 ft/5000 ft/6000 ft (jet). Climb speed increment below 500 ft/1000 ft/1500 ft (turbo/piston). Descent speed increment below 1000 ft/1500 ft/2000 ft/3000 ft (jet/turboprop). Descent speed increment below 500/1000/1500 ft (piston).	None			
Cruise Management			Several criteria that are commonly used to optimize the cruise phase of a flight depending on the aircraft weight (W), cruise geopotential pressure altitude (Hp) and atmospheric conditions expressed as the temperature deviation (DT) from the ISA conditions. The Optimized Performance Tables (OPT) provide pre-computed optimum fligt parameters.				
	Maximum Range Cruise (MRC)		The objective of the MRC is to maximize the flight range for given values of fuel load and atmospheric conditions, usually at constant Hp.	None		All available BADA aircraft types	
	Long Range Cruise (LRC)		In comparison to the MRC, a slight increase in fuel consumption allows a significant increase in Mach number and a reduction in flight time for the same conditions.	None			
	Holding, Maximum Endurance Cruise (MEC)		It is defined as the maximization of the time an aircraft can remain airborne with a given amount of fuel, i.e. the fuel consumption is minimized with respect to time.	None			
	Optimum Altitude		The optimum altitude $H_{p,opt}$ is defined as the geopotential pressure altitude at which the specific range is maximum for given values of Mach number, aircraft weight and atmospheric conditions.	None			
Cost Management			The objective of the cost management is the minimization of the total flight cost C_t (also called direct operating cost).				
	Cost Index Cruise Management		CI cruise management is based on the determination of an optimum cruise speed, called economic Mach number M_{ECON}. ECON.OPT file provides precomputed parameters.	None		All available BADA aircraft types	
	Cost Index Climb Management		CI climb management is based on the determination of an optimum climb speed schedule, composed of economic climb speed CAS'_{ECON} (calibrated airspeed) and Mach number M'_{ECON} that form the economic climb speed schedule.	None			
	Cost Index Descent Management		CI descent management is based on the determination of an optimum descent speed schedule, composed of economic descent speed CAS''_{ECON} (calibrated airspeed) and Mach number M''_{ECON} that form the economic descent speed schedule.	None			
non-BADA Data							
Aircraft Operators			Identification information about the Aircraft Operators.				

	Airline Radio Callsign		Radio callsign for the Airline Company of the identified Aircraft Operating Agencie.	AIXM 5.1 Core		World Wide	*Ref. Source - ICAO Document 8585. non-BADA Data is an identification information which is not attached to any Aircraft/BADA types.*