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Provision of Digital Data sets

1 . Purpose

1.1. The purpose of this circular is to inform all stakeholders about the upcoming publication of data sets as part of a **TRIAL PHASE.** This initiative is intended for testing, reviewing, and collecting constructive feedback.

2 . Scope

2.1. Digital data may be presented in the form of the following data sets:
a) AIP data set.
b) terrain data sets.
c) obstacle data sets
d) aerodrome mapping data sets.
e) instrument flight procedure data sets.

2.2. Data sets will be published in compliance with GACAR Part 175 and ICAO Annex 15 requirements. They will be hosted on the SANS website at https://aimss.sans.com.sa .

3 . Publication of Data sets

3.1 Phase One

3.1.1. In the first phase, only Aeronautical Information Publication (AIP) data set will be published in the AIXM 5.1 XML format as a trial. The data set will include the following subjects, with the properties indicated in brackets being included as a minimum (if applicable):
a) Air Traffic Services (ATS) airspace (type, name, lateral limits, vertical limits, class of airspace).
b) Special activity airspace (type, name, lateral limits, vertical limits, restriction, activation).
c) ATS route and other route (Identifier prefix, designator, flight rules).
d) Route segment (navigation specification, from point, to point, track, length, upper limit, lower limit, Minimum En-Route Altitude (MEA), Minimum Obstacle Clearance Altitude (MOCA), direction of cruising level, required navigation performance).
e) Waypoint – en-route (Reporting requirement, identification, location, formation).
f) Aerodrome/heliport (ICAO location indicator, name, International Air Transport Association (IATA) designator, served city, certified ICAO, certification date, certification expiration date, control type, field elevation, reference temperature, magnetic variation, airport reference point).
g) Runway (designator, nominal length, nominal width, surface type, strength)
h) Runway direction (designator, true bearing, threshold, Take Off Run Available (TORA), Take-Off Distance Available (TODA), Accelerate-Stop Distance Available (ASDA), Landing Distance Available (LDA), rejected TODA (for helicopters)).
i) Final Approach and Take-Off (FATO) (designation, length, width, threshold point).
j) Touchdown and Lift-Off (TLOF) (designator, center point, length, width, surface type).
k) Radio navigation aid (type, identification, name, aerodrome/heliport served, hours of operation, magnetic variation, frequency/channel, position, elevation, magnetic bearing, true bearing, zero bearing direction).

Note 1: The description of the data subjects, together with their properties, data type and applicable data quality requirements, is provided in Appendix 1 of GACAR Part 175.
Note 2: The AIP data set includes relevant AIP Amendments and AIP Supplements.

3.1.2. When a property is not defined for a particular occurrence of the subjects listed in 3.1.1, the AIP data subset will include an explicit “not applicable” indication.

3.2 Phase Two

3.2.1. In the second phase, additional data sets will be published alongside the AIP data sets in AIXM 5.1 XML format, including:
- Obstacles data sets (currently, obstacle data sets are published in KSA AIP on (.xlsx) and (.pdf) formats).
- Instrument Flight Procedure data sets.

3.2.2. Aerodrome Mapping data sets are not currently planned for publication.

4 . Terrain Data sets

4.1. Terrain data sets for Area 1 and Area 2 are published in the KSA AIP GEN 3.1.6 in GeoTIFF format.

5 . Content

5.1. The data set content is coded in accordance with the guidelines from Eurocontrol AIXM Confluence (www.eurocontrol.int), which introduces AIXM and ICAO data sets.

5.2. The AIXM data sets will include metadata compliant with GACAR Part 175 requirements and Eurocontrol guidelines that ensure traceability.

6 . Availability

6.1. During Phase One, AIP data sets will be updated in line with the AIRAC cycle. These will be provided with a TimeSlice interpretation labeled 'BASELINE'. New AIP data sets will also be provided with 'BASELINE' TimeSlice interpretation, accompanied by a data set labeled 'PERMDELTA' that contains only the changes from the previous ‘BASELINE’.

6.2. The AIP Data Set file will have the following name structure:
“OE_AIP_DS_Variant_YYYYMMDD.xml", where:
a) AIP_DS is a fixed text (meaning “AIP Data Set”).
b) Variant is a mandatory element, and it can take one of the following values:
- FULL - when the file contains a complete AIP data set or a subset thereof.
- DIFF_BL - when the file contains an AIP Data Set Differences variant coded with BASELINE TimeSlices.
- DIFF_DELTA - when the file contains an AIP Data Set Differences variant coded with PERMDELTA TimeSlices.
- SUP - when the file contains a Supplementary AIP Data set.

c) YYYYMMDD is the start of effective date in the format year, month, date.

7 . Data set Product Specifications

7.1. The description of available digital data sets will be provided in the form of data product specifications (DPS) on which basis air navigation users will be able to evaluate the products and determine whether they fulfil the requirements for their intended use (application).

8 . Data set Checklist

8.1. From Phase Two onwards, a comprehensive checklist of valid data sets and their effective dates will be available on the SANS website at https://aimss.sans.com.sa .

9 . Usage

9.1. Data sets provided in Phase One are for testing and evaluation purposes only. While the AIP data sets align with operational AIP content, this cannot be guaranteed, and they MUST NOT be used in any existing operational processes by users.

10 . Timescales

10.1. The publication of AIP data sets in trial phases one and two (not intended for operational use) is scheduled in January 2025.

10.2. The conclusion of the trial phases and the initiation of official use of the digital datasets will be announced through a separate Aeronautical Information Circular (AIC).

11 . Contact

11.1. For feedback and further information, please contact AIM via email at aim@sans.com.sa .

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