

Acceptable Means of Compliance (AMC)
and
Guidance Material (GM)
to Part-DAT
Specific requirements for providers of data
services

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SUBPART A — ADDITIONAL ORGANISATION REQUIREMENTS FOR PROVIDERS OF DATA SERVICES (DAT.OR)**Section 1 — General requirements****AMC1 DAT.OR.100 Aeronautical data and information**

GENERAL

- (a) Aeronautical data and information in this context should consist of:
- (1) Integrated Aeronautical Information Package (IAIP); and/or
 - (2) obstacle data; and/or
 - (3) terrain data; and/or
 - (4) Aerodrome Mapping Data (AMD); and/or
 - (5) other data and information that is validated by the DAT provider for the purpose of provision of its services.
- (b) Aeronautical databases should be databases, used on certified aircraft application/equipment, that support the flight operation where incorrect data leads to failures having at least minor or higher failure effect.
- (c) The scope should not include databases that are approved as part of the type design of the aircraft or engine (e.g. engine power settings (take-off, climb, maximum continuous thrust (MCT), cruise) and aircraft performance data (e.g. take-off distance, V speeds)).

GM1 DAT.OR.100 Aeronautical data and information

GENERAL

- (a) In the context of this Regulation, aeronautical databases should include databases, used on certified aircraft applications, that support the flight operation of aircraft for the purpose of primary communication, navigation and surveillance (CNS) or supplementing CNS.
- (1) Database used in primary CNS applications (e.g. flight management system (FMS)).
 - (2) Database used in supplementary CNS applications including but not limited to systems generating alerts and used for awareness having the following databases:
 - (i) database for synthetic vision systems;
 - (ii) terrain database (TAWS);
 - (iii) obstacle database (TAWS);
 - (iv) aerodrome mapping database (AMDB);
 - (v) brake assistance to vacate; and
 - (vi) surface indication and alert system.
- (b) Databases for which the DAT provider is not required to be certified in accordance with this Regulation include but are not limited to:

- (1) databases provided and/or used by the operator of the aircraft that are monitored under the operator's responsibility and not loaded into certified aircraft applications (e.g. airport moving map used in electronic flight bags (EFBs), take-off and landing performance used in EFBs);
- (2) databases not having any safety affect (e.g. used for passenger in-flight entertainment (IFE) systems outside the flight deck, etc.); and
- (3) databases for systems applications/equipment installed on aircraft certified for visual flight rules (VFR) operation only, except those used for primary navigation to meet the airspace usage requirements.

AMC1 DAT.OR.100(a) Aeronautical data and information

DATA SOURCE

The DAT provider should use data coming from authoritative sources. If such data is not formally made available by an authoritative source or does not meet the applicable data quality requirements, but is required by end users, the DAT provider may use data from other (non-authoritative) sources, provided these have been verified and validated by the DAT provider itself and/or other DAT providers to conform with the relevant standards and data quality requirements.

If a non-authoritative source is used for the data release, the DAT provider should issue a statement at its discretion.

GM1 DAT.OR.100(a) Aeronautical data and information

VALIDATION OF AERONAUTICAL DATA

The processes of validating the aeronautical data by DAT provider should meet the standards specified in EUROCAE ED-76A/RTCA DO-200B 'Standards for Processing Aeronautical Data', dated June 2015, especially Section 2.4.1 (6) and Appendix C, in particular points C.2.1 and C.2.2. EUROCAE ED-76/RTCA DO-200A may be also used for the demonstration of compliance.

GM1 to AMC1 DAT.OR.100(a) Aeronautical data and information

NON-AUTHORITATIVE SOURCE

- (a) A non-authoritative source may be an organisation other than those defined in point 32 of Annex I, but providing and/or publishing data derived from data gathering or measuring performed (e.g. by aircraft operators, air crew, DAT providers, or other similar operational organisations, or a combination thereof), transformation of various sources to provide aeronautical data which conform with relevant standards and data quality requirements as specified by the airspace end users.
- (b) When validating data from a non-authoritative source, the DAT provider should proceed by using either additional information sources to validate this data (like satellite imagery, data or manuals from other providers, users, military, etc.), or data which has been tested and confirmed through operations.

GM2 to AMC1 DAT.OR.100(a) Aeronautical data and information

DATA SOURCE

The first known DAT provider that uses data coming from other (non-authoritative) sources in the aeronautical data chain, accepts the responsibility of the data originator (i.e. ensuring that the data meets the data quality requirements).

GM3 to AMC1 DAT.OR.100(a) Aeronautical data and information

END USER

In the context of this Regulation, the end users should be considered the 'airspace users' as defined in Article 2(8) of Regulation (EC) No 549/2004.

GM1 DAT.OR.100(b) Aeronautical data and information

GENERAL

- (a) The full responsibility for the origination and provision of tailored data and its subsequent updates, as required, should lie with the aircraft operator.
- (b) The origination and provision of tailored data by an aircraft operator or on the aircraft operator's behalf for the purpose of air operation is not part of the DAT provider's scope of activities and this Regulation does not cover its oversight.
- (c) The use of tailored data is related and limited to the operational purposes of the aircraft operator that requested the insertion of the tailored data.

GM1 DAT.OR.105(a)(1) Technical and operational competence and capability

AERONAUTICAL DATA SOURCE PROVIDER

Aeronautical data source providers should be considered at least, but are not limited to:

- (a) organisations providing authoritative data for the purpose of air navigation (e.g. AIS providers);
- (b) the DAT provider itself or another DAT provider;
- (c) the aircraft operator(s) for tailored data; and
- (d) the aerodrome operator(s), in case the information is not provided in the AIPs.

GM2 DAT.OR.105(a)(1) Technical and operational competence and capability

DQR COMPATIBILITY

The Type 2 DAT provider should ensure through an appropriate arrangement that the equipment design approval holder or an applicant for an approval of that specific design is responsible for demonstrating (e.g. using system verification tests, sampling checks, etc.) that the DQRs are consistent with the intended function of the equipment.

AMC1 DAT.OR.105(a)(2) Technical and operational competence and capability

STATEMENT OF CONFORMITY FOR AERONAUTICAL DATABASES

Logo of the DAT provider	Statement of conformity for aeronautical databases	
1. DAT provider certificate number:	No	
2. Type 1/Type 2* DAT provider : <i>* delete as appropriate</i>	Name	

3. Address:	Address	
4. Database identification:	Identification	
5. Database use:	Applications/standards	
6. Deviations:	Deviations	
7. New database release:	8. Additional database release (correction):	
9. Declaration of conformity: [XXX] databases released and distributed are produced in compliance with Regulation (EU) 2017/373		
10. Attesting staff:		
Date:	Name: Name	Signature: Signature
AIRAC cycle/ validity period:		

Information to be entered into the statement of conformity for DAT form:

Field 4: List all the identifications of the databases covered under this release, or make reference to the document listing all the identifications of the released databases.

Field 5:

- In case of Type 1 DAT provider, list the standard data formats.
- In case of Type 2 DAT provider, list the equipment models and part numbers where compatibility has been demonstrated, or make reference to the document containing equipment models and part numbers where compatibility has been demonstrated.

Field 6: List the deviations or make reference to where the deviation information can be found (e.g. a weblink).

Field 10: Signature of an authorised representative of the applicant.

**AMC2 DAT.OR.105(a)(2) Technical and operational competence and capability
PRODUCING AND UPDATING AERONAUTICAL DATABASES**

The processes of producing and updating aeronautical databases should meet the standards specified in EUROCAE ED-76A/RTCA DO-200B 'Standards for Processing Aeronautical Data', dated June 2015. EUROCAE ED-76/RTCA DO-200A may be also used for the demonstration of compliance.

GM1 DAT.OR.105(b) Technical and operational competence and capability

INDEPENDENCE

A DAT provider should ensure that the attesting staff and the person involved in the database release is not a single person (i.e. the four-eye principle).

AMC1 DAT.OR.110 Management system

ISO 9001/EN 9100 CERTIFICATE(S) FOR TYPE 1 DAT PROVIDERS

In reference to ISO 9001/EN 9100 certificates issued by appropriate accredited organisations, please refer to AMC1 ATM/ANS.OR.B.005(a) 'Management system' ISO 9001/EN 9100 CERTIFICATE(S) FOR TYPE 1 DAT PROVIDERS.

AMC2 DAT.OR.110 Management system

EN 9100 CERTIFICATE FOR TYPE 2 DAT PROVIDERS

In reference to EN 9100 certificate issued by appropriate accredited organisations, please refer to AMC1 ATM/ANS.OR.B.005(a) 'Management system' EN 9100 CERTIFICATE FOR TYPE 2 DAT PROVIDERS.

AMC1 DAT.OR.110(h) Management system

TOOLS QUALIFICATION

Tools qualification should meet the standards specified in EUROCAE ED-76A/RTCA DO-200B 'Standards for Processing Aeronautical Data', dated June 2015. EUROCAE ED-76/RTCA DO-200A may be also used for the demonstration of compliance.

Section 2 — Specific requirements

GM1 DAT.OR.200 Reporting requirements

GENERAL

The DAT provider should notify the competent authority of the following by using the occurrence reporting form:

- (a) errors/deficiencies affecting safe operations in an airspace segment/block;
- (b) errors/deficiencies with negative impact on safety stemming from a source in a Member State or a functional airspace block (FAB); and
- (c) errors/deficiencies with negative impact on safety stemming from erroneous processing of the data or information within the intended aircraft application/equipment.

GM1 DAT.OR.200(b) Reporting requirements

UNSAFE CONDITION

'Unsafe condition' may be considered as a situation where due to a data error there will be, but is not limited to:

- aircraft deviation from the published procedure;
- erroneous warning (red colour) in the cockpit (e.g. PULL UP, TERRAIN, RWY TOO SHORT);
- pilot workload increase due to presentation of misleading or conflicting data in the primary flight display; and

- malfunction or defect of an indication system at a critical phase of the flight, etc.

SUBPART B — TECHNICAL REQUIREMENTS FOR PROVIDERS OF DATA SERVICES (DAT.TR)

Section 1 — General requirements

AMC1 DAT.TR.100(a)(1) Working methods and operating procedures

COMPATIBILITY WITH CERTIFIED AIRCRAFT APPLICATION/EQUIPMENT — TYPE 2 DAT PROVIDER

A Type 2 DAT provider should perform tests to ensure that the database works as intended with the application by performing sampling checks on individual data sets (e.g. in a simulation/test bench environment).

AMC1 DAT.TR.100(a)(2) Working methods and operating procedures

DATA SOURCE

In reference to the 'data source', please refer to AMC1 DAT.OR.100(a) 'Aeronautical data and information'.

GM1 DAT.TR.100(a)(2) Working methods and operating procedures

DATA EXCHANGE

To support data integrity, the DAT provider may use digital data sets as a preferred means of data exchange.

AMC1 DAT.TR.100(a)(3) Working methods and operating procedures

DATA PROCESSING

The DAT provider should keep the records for a period of at least 3 years after the end of the validity period of the database unless otherwise specified by other applicable requirements.

GM1 DAT.TR.100(b) Working methods and operating procedures

SIGNATURE

The attesting staff, authorised by the DAT provider, may sign the statements issued in accordance with DAT.OR.105(b) manually or in a digital manner (e.g. digital signature).

AMC1 DAT.TR.100(b)(1) Working methods and operating procedures

ATTESTING STAFF

- To qualify as attesting staff, appropriate knowledge, background, experience and specific training or assessment established by the DAT provider should be required.
- Training should be provided to develop a satisfactory level of knowledge of organisational procedures, processes and products, aviation law, and associated IRs, AMC and GM, relevant to the particular role.
- In addition to the general training policy, the DAT provider should define its own standards for training, including qualification standards, for personnel to be identified as attesting staff.
- The training should be updated in response to experience gained and technological advancements.

AMC1 DAT.TR.100(b)(2) Working methods and operating procedures

RECORDS OF ATTESTING STAFF

- (a) The following is the minimum information that should be recorded by the DAT provider in respect of each attesting staff member:
 - (1) name;
 - (2) general training and standard attained;
 - (3) specific training and standard attained;
 - (4) continuation training, if appropriate;
 - (5) background experience;
 - (6) scope of the authorisation; and
 - (7) date of first issue of the authorisation.
- (b) The record should be kept in an appropriate format and should be controlled through an internal procedure of the organisation. This procedure could be part of the management system.
- (c) The DAT provider should ensure that the number of persons authorised to access the system of personnel data record-keeping is limited and an appropriate access control mechanism is in place.
- (d) The attesting staff member should be given access, upon request, to his or her own records.
- (e) The DAT provider should keep the record for at least two years after the attesting staff member has ceased employment with the organisation or the withdrawal of the authorisation, whichever occurs first.

GM1 DAT.TR.100(b)(2) Working methods and operating procedures

RECORDS OF ATTESTING STAFF

Records of the attesting staff may be stored electronically.

AMC1 DAT.TR.100(b)(3) Working methods and operating procedures

EVIDENCE OF THE SCOPE OF THE ATTESTING STAFF AUTHORISATION

- (a) The authorisation document should clearly indicate the scope of the authorisation to allow attesting staff and any other authorised persons to verify the privileges.
- (b) Attesting staff should make the authorisation document available to the competent authority upon request.

AMC1 DAT.TR.105(a) Required interfaces

INTERFACES WITH THE AERONAUTICAL DATA SOURCE AND/OR OTHER DAT PROVIDERS

- (a) The DAT provider should demonstrate that formal interfaces with aeronautical data sources or other DAT providers are implemented. Procedures should be established to communicate instances of erroneous, inconsistent or missing data to such providers and monitor that timely and effective responses are received.
- (b) Where resolution and correction cannot be obtained for data that has been called into question, the DAT provider's procedures for dealing with this situation should ensure that the DAT provider

communicates the alteration or removal of data which the aeronautical data source and/or other DAT provider has not concurred with or resolved. The DAT provider's procedures should confirm that effective controls are in place to ensure that an unsafe product is not released and that such concerns are communicated to customers in accordance with the requirements laid down in DAT.OR.200.

AMC1 DAT.TR.105(b) Required interfaces

INTERFACES WITH THE AIRCRAFT EQUIPMENT DESIGN APPROVAL HOLDER FOR TYPE 2 DAT PROVISION

The DAT provider should demonstrate that formal interfaces exist with the equipment design approval holder. In particular, the DAT provider's procedures should stipulate that the equipment design approval holder communicates and responds to issues and constraints concerning compatibility/eligibility for installation between their equipment and the databases of the DAT provider.

AMC1 DAT.TR.105(c) Required interfaces

INTERFACES WITH AIRCRAFT OPERATORS — TYPE 2 DAT PROVIDERS

The Type 2 DAT provider should demonstrate that a formal interface with aircraft operators is in place to confirm that operators' requests are clearly defined and subject to review.