Règlement EASA AIS / AIM

Séminaire UAF
Bordeaux, 31 Mai 2016

Stéphane DUBET, DSNA / SIA, EASA AIS/AIM RMG Chairman
THE DRIVER

Better regulation

AIM

Simple & clear rules

Smooth transition

Transposition of existing good regulatory material

Reflect today's practice

Means of compliance & Guidance
THE OBJECTIVES

‘ensure that the quality of aeronautical data and aeronautical information is met at origination, production and delivery of the aeronautical information products and services’

Propose rules for:

• Aeronautical information products and services
  – ICAO Annex 15
    • AIS providers responsibilities
    • AIP, NOTAM, AIRAC, AIC, PIB, Terrain & Obstacles, AMD

• Aeronautical data quality
  – Regulation (EU) No 73/2010
    • Data quality requirements
    • Service providers, origination
THE CHALLENGES

**Data Quality**
- Reg. 73/2010
- Low implementation
- Annex 15
- Necessary alignment w/other domains

**AIS-AIM**
- New Annex 15
- New Pans-AIM
- ICAO & EASA rules development running in parallel
- Inconsistencies in Data Quality Requirements
- Upcoming ICAO Data catalogue
THE SCOPE

Data Origination
Multiple sources from public and private entities

Aeronautical Information Service
e.g. State AIPs

Data Providers
e.g. application integrators

End Users Air
e.g. Airspace users, Aircraft manufacturers

EASA Opinion 02/2015

Survey
Aerodrome
Airspace/Procedure Design
ATS Provider
MET Service Provider
CNS Provider
SAR Service Provider
State Data Provider
Mapping Agencies
Geological Data Provider
Geodetic Data Provider
Satellite Data Provider
Industrial Data Provider
Academic Data Provider
Obstacle Owners
Other…
• Methodology
  – Starting point:
    • Annex 15 - AIS-AIM as a service
    • Regulation 73/2010 - Origination
  – Focus on Data quality
  – Keep the “better regulation” driver in mind
  – Address all the “upstream chain”

• Deliverables
  – Implementing Rules: Organisation & Technical Requirements
  – AMC/GM using all existing material
  – Include impact on existing rules (139/2014 on ADR, ANS providers, aviation undertakings)
KEY INPUTS

Annex 15
Annex 4

"ADQ"

Basic Regulation, 139/2014

EASA rules on AIM
OVERCOMING THE CHALLENGES

• ICAO Annex 15 major change in progress
  – Work by ICAO AIS-AIM SG running in parallel
  – Draft rule to reflect the latest version of the work by ICAO
  – Transposes both ICAO Annex 15 and PANS-AIM

• Addressing all data originators
  – Requirements applicable to all ANS providers
  – Some data originators are beyond the scope of EASA Regulation
  – Data originated by aviation undertakings (non-aviation parties) to follow minimum data quality requirements, compliance to be checked by competent authority.
  – Ensure consistency with 139/2014 aeronautical data quality related provisions (-> impact on existing rule)

‘Aviation undertaking’ means an entity, person or organisation, other than the service providers regulated by this Regulation or other than the aerodrome operators regulated by Regulation (EU) No 139/2014 that is affected by or affects a service delivered by a service provider or an aerodrome operator.
ICAO AIM STANDARDS EVOLUTION

State provisions (or « what »)

Operational provisions/’AIM Practitioners’ instructions (or « how to »)

Explanatory / Guidance text

EASA AIS-AIM Thematic Meeting, 3 February 2016 - Cologne
### DATA CATALOGUE

#### Data Catalogue - Aerodrome

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>Description</th>
<th>E</th>
<th>F</th>
<th>G</th>
<th>H</th>
<th>I</th>
<th>J</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>Runway</td>
<td></td>
<td></td>
<td>A defined rectangular area on a land aerodrome prepared for the landing and take-off of aircraft. (Annex 14)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>designator</td>
<td>Text</td>
<td></td>
<td>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 1.</td>
<td>Annex 14 I 2.5.1 a)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>nominal length</td>
<td>Distance</td>
<td></td>
<td>The declared longitudinal extent of the runway for operational (performance) calculations.</td>
<td>Annex 14 I 2.5.1 a)</td>
<td>1m</td>
<td>Critical</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>nominal width</td>
<td>Distance</td>
<td></td>
<td>The declared transversal extent of the runway for operational calculations.</td>
<td>Annex 14 I 2.5.1 a)</td>
<td>1m</td>
<td>Essential</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>profile</td>
<td>Coordinates</td>
<td></td>
<td>The profile of the centre line of the runway (including the beginning and end of the runway centre line at the origin of each approach area, at each significant change of slope of the runway, at the stopway, take-off and runway intersection).</td>
<td>AMDB</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>runway exit line</td>
<td>Coordinates</td>
<td></td>
<td>Continuous line comprising of a runway containing the last continuously marked portions.</td>
<td>Annex 4 Ch 3 and 4, 5 AMDB</td>
<td>0.25m</td>
<td>Critical</td>
<td>surveyed</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>colour</td>
<td>List</td>
<td></td>
<td>Colour of runway exit line.</td>
<td>AMDB</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>style</td>
<td>List</td>
<td></td>
<td>Style of runway exit line.</td>
<td>AMDB</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>direction</td>
<td>List</td>
<td></td>
<td>Directionality of corresponding traffic instance, which can be oneway or two-way.</td>
<td>AMDB</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>surface type</td>
<td>Text</td>
<td></td>
<td>Surface Type runway.</td>
<td>Annex 14 I 2.5.1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Usage:**
- Common language
- One-stop-shop
- SLA with DOs
OVERALL RULE STRUCTURE

Regulation CR-O

Cover regulation

Annex I Definitions
From ICAO and Reg. 73

Annex III ATM/ANS OR

Annex VI Part-AIS

Data catalogue

AIS-AIM & DQR related

Origination

Article 3 Data origination for aviation undertakings

+ Amendments to Reg 139/2014 (ADR)
AIS/AIM RULE STRUCTURE

• General requirements
  – Information management, responsibilities of SP, data limitations

• Data quality requirements
  – Reference to data catalogue, data exchange, metadata, error reporting and corrective actions

• Aeronautical information products
  – AIP, AIP amendments, AIP supplements, AIC
  – Aeronautical charts (provision req’t and object per chart)
  – NOTAM
  – Digital data sets (AIP, TOD, AMD, IFP)

• Distribution and pre-flight information services

• Aeronautical information product updates
  – AIRAC, NOTAM updates, Data updates

• Personnel requirements
  – General requirements and language proficiency
Amdts to Reg 139/2014
Additions to ADR

- **Personnel requirements**
  - Competency, training and authorization of personnel involved in provision of aeronautical information

- **Data error detection and authentication**
  - Performance based approach in the rule
  - For AMC: open question on application of CRC (alignment w/Annex 14)

- **Data Catalogue**
  - Origination of data shall comply with the Data Catalogue

- **Metadata**
  - Identification of organisation performing origination
  - Action performed on data
  - Date and time of the action
  - Details of any limitations on the data

- **Data exchange**
  - Use of electronic means
AMC and GM for Aerodromes

• AMC on Data Quality Requirements
  – Performance based approach to automation v/v quality
  – Error handling and corrective action mechanisms

• Deletion of DQR tables from the AMC
  – Superseded by the Data Catalogue

• Formal arrangements
  – Minor (consistency) adjustments

• Data error detection and authentication
  – CRC (but still open through question to stakeholders in the NPA)
EUROPEAN AIS/AIM RULE EVOLUTION

Previous rules

- Data originators
- Data set requirements
- AIXM 5.1
- CRC32Q
- Quality, safety, Security management
- Conformity/Suitability of constituents
- Formal arrangements
- Tools and software

New EASA proposal

- Member States’ responsibility
- Use of the developed ICAO DC
- Performance based approach
- Other means introduced
- Common Requirements Reg.
- Reg. 552/2004 sufficient
- Flexibility approach
- Pragmatic approach

- Specific DQR for originators
- Data catalogue
- Exchange model globally interoperable
- Cycling codes or cryptographic tech.
- Management system covered by CR Reg.
- Content at AMC level
- Not at origination level

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NPA 2016-02

Public consultation (persons or organisations)

Open for comments until end August 2016

Follow-up:
- Review of comments
- Thematic meetings as required
- Further formal consultation if necessary
- Opinion + Common Response Document release

European Aviation Safety Agency

Notice of Proposed Amendment 2016-02

Technical requirements and operational procedures for aeronautical information services and aeronautical information management

RMT.0477 — 27.4.2016

EXECUTIVE SUMMARY

This Notice of Proposed Amendment (NPA) addresses a safety issue related to the provision of aeronautical information services (AIS) and aeronautical information management (AIM).

The main objective of this NPA is to maintain a high level of safety, increase efficiency and provide for greater cost-effectiveness of the air navigation system by achieving an uninterrupted aeronautical data chain with no loss or corruption in data and information and with guaranteed data quality.

The role and importance of aeronautical data and aeronautical information has changed significantly with the implementation of area navigation (RNAV), performance-based navigation (PBN), airborne computer-based navigation systems and data link systems. Corrupt, erroneous, late, or missing aeronautical data and aeronautical information can potentially affect the safety of air navigation.

The specific objectives of this NPA are to: 1) ensure that aeronautical data and aeronautical information are originated, assembled, edited, formatted, published and finally provided at the required level of quality to the next intended user and for all phases of flight; the quality of the data shall be proportionate to the types of aeronautical actors involved; 2) ensure alignment in an efficient and effective way with the latest International Civil Aviation Organization (ICAO) Annex 15 amendment; and 3) ensure enough proportionality and flexibility to allow smooth implementation of AIS.

This NPA proposes rules for:
- ATM/ANS providers; and
- organisations involved in the origination of aeronautical data.

It amends Annexes I (Definitions), II (Part-ATM/ANS.AR), III (Part-ATM/ANS.OR) and VI (Part-AIS) to Regulation .../.... laying down common requirements for service providers and the oversight in air traffic management/air navigation services and other air traffic management network functions. as well as Regulation (EU) No 139/2014 of 12 February...
NPA STRUCTURE

- Procedural information
- Explanatory note
  - Overview of the issue to be addressed
    - Current issue in AIS-AIM
    - What does this NPA try to solve?
  - Summary of the regulatory context
    - ICAO Annex 15
    - Regulation (EU) No 73/2010
  - Summary of the proposal
    - Explanation of the proposed text
  - Data quality requirements – changes to ADQ Reg
  - Overview of the proposed amendments
    - Why the amendments are proposed;
  - Text of the proposed amendments
- Proposed amendments
- Regulatory Impact Assessment (RIA)
- References
- Appendices
THE PROPOSED AMENDMENTS

• Proposed amendments to Reg (EU) No .../.. on ‘Requirements for service providers and the oversight thereof’
  – Article 3 (origination by aviation undertakings)
  – Annex I - Definitions
  – Annex II – Part-AR (authorities – certification of AIS-providers)
  – Annex III – Part-OR (origination by service providers)
  – Annex VI – Part-AIS (req’ts applicable to AIS providers)

• Proposed amendments to Reg (EU) No 139/2014
  – Aeronautical data quality

• Proposed amendments to AMC and GM to Authority, Organisation and Operations Requirements for Aerodromes
1 European AIM rule