
The Data Catalogue



Seminar on PANS-AIM - Annex 15 to the Convention of Civil Aviation
Lima, Peru, 14 to 16 November, 2018

Content

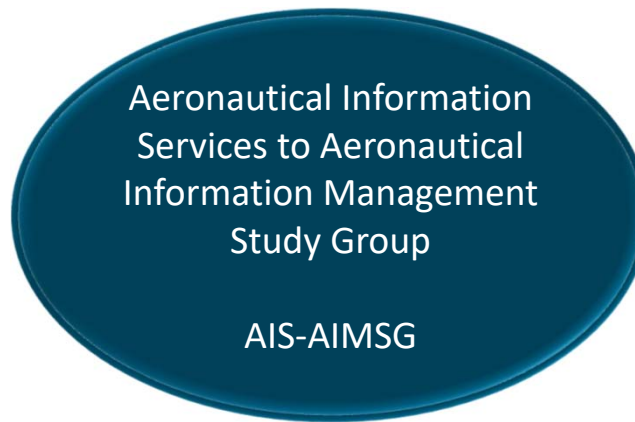


1. Introduction

2. Institutional significance and potential benefits

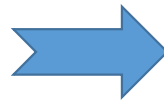
3. Data Catalogue Implementation

The intent



Introduction

The process



AIS-AIMSG/7

PANS AIM Chapter 4 to contain the collection and a detailed description of the data and information requirements.

- ICAO Annex 4
- ICAO Annex 11
- ICAO Annex 14
- ICAO Annex 15
- PANS-OPS
- AIXM 5.1
- RTCA/EUROCAE AMDB

AIS-AIMSG/12

Last review of the Data Catalogue within the Study Group.

Introduction

The challenges

- Time was short
- Multiple sources of data had to be managed
- Data elements to be managed were numerous
- Knowledge from multiple domains was needed



Source: <https://www.tatacapital.com>

Introduction

The team

- AIS-AIMSG
- Support through organizations / companies of AIS-AIMSG Members
- IFPP/IWG
Instrument
Flight Procedure Panel /
Integration Working Group













<http://www.tax-hell.co.uk/help-me-to-help-you/>

Introduction

The result

ICAO											
Subject	Property	Sub-Property	Type	Description	Note	Accuracy	Integrity	Orig Type	Pub. Res.	Chart Res.	
Runway				A defined rectangular area on a land aerodrome prepared for the landing and take-off of aircraft. (Annex 14)							
	Designator		Text	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,							

-  PANS-AIM -- Appendix 1 -- Table A1.1 Aerodrome.xlsx
-  PANS-AIM -- Appendix 1 -- Table A1.2 Airspace.xlsx
-  PANS-AIM -- Appendix 1 -- Table A1.3 ATS_Routes.xlsx
-  PANS-AIM -- Appendix 1 -- Table A1.4 IFP.xlsx
-  PANS-AIM -- Appendix 1 -- Table A1.5 Navaid.xlsx
-  PANS-AIM -- Appendix 1 -- Table A1.6 Obstacles.xlsx
-  PANS-AIM -- Appendix 1 -- Table A1.7 GeographicInformation.xlsx
-  PANS-AIM -- Appendix 1 -- Table A1.8 Terrain.xlsx
-  PANS-AIM -- Appendix 1 -- Table A1.9 Data type.xlsx
-  PANS-AIM -- Appendix 1 -- Table A1.10 Other information.xlsx

Introduction

The result

In other words:

The Data Catalogue is not just an ICAO SARPs, but a tool to ease your job.



DC first time shown to ANC on 10.11.2014

Institutional significance and potential benefits

One-Stop-Shop for AIS Data



- Aerodrome data
- Airspace data
- ATS and routes data
- Instrument flight procedure data
- Radio navigation aids data
- Obstacle data
- ..and more

Institutional significance and potential benefits

One-Stop-Shop for DQR



- Aerodrome data
- Airspace data
- ATS and routes data
- Instrument flight procedure data
- Radio navigation aids data
- Obstacle data
- ..and more

Distribution of responsibilities

- Who / Which organization is responsible for originating a certain data or set of data?

Aerodrome data

Aerodrome Operator

Customs regulations

Aerodrome Operator

- The granularity can vary, depending on the situation - DC Subject, Property, Sub-property

Institutional significance and potential benefits

Service Level Agreements

- Service Level Agreements between data originators and AIS could be based on elements of the Data Catalogue.

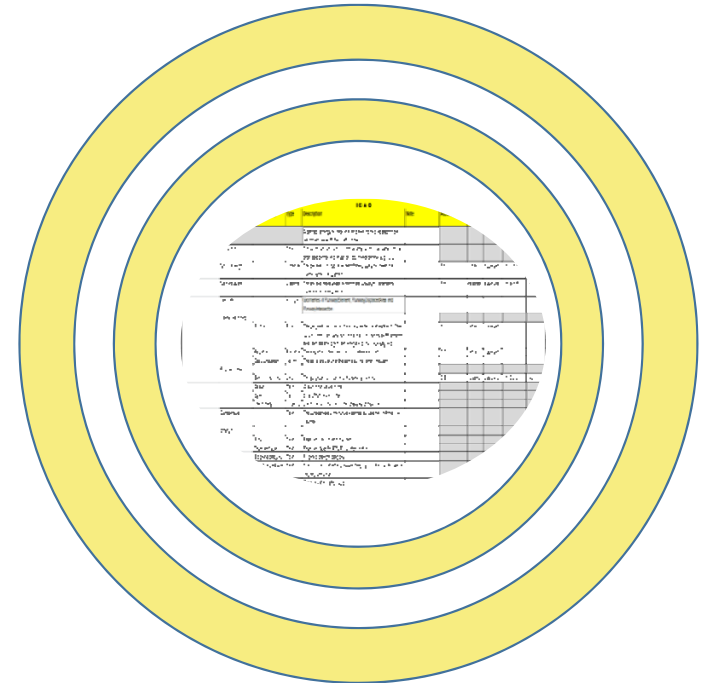
Subject	Property	Sub-Property	Type	Description	ICAO	Note	Accuracy	Integrity	Orig Type	Pub. Res.	Char. Res.
Runway				A defined rectangular area on a land aerodrome prepared for the landing and take-off of aircraft. Annex 14							
	Designator		Text	The alphanumeric designator of the runway, used as an alphanumeric code in an appropriate location on the runway. E.g. 05/23							
	Normal design		Distance	The declared longitudinal extent of the runway for operations (performance) calculations.				cross	surveys	non-p	non
	Normal width		Distance	The declared transverse extent of the runway for operations (performance) calculations.				essential	surveys	non-p	non
	Geometry		Geometry	Coordinates of RunwayElement, RunwayDisplacedArea and RunwayIntersection							
	Centre line data										
		Position	Point	The geographic location of runway centre line at each end of runway, at the runway end at the end of the runway area, and at each step change in area.							
		Elevation	Elevation	The elevation of the corresponding centre line.							
		Geoid elevation	Height	The geoid elevation at the corresponding centre line.							
		Width at end	Distance	The width of the runway at the end of the runway.							
		Bit, surface	Text	The pavement classification of the runway end.							
		Colour	Text	Colour of runway end.							
		Size	Text	Size of runway end.							
		Direction	Code	Direction of RWY end: 00=one-way or two-way							
		Surface type	Text	The surface type of the runway defined as specified in Annex 14							
		Strength									
		FCN	Text	Pavement classification number							
		Pavement type	Text	Pavement type for ACP/PCN determination							
		Surface category	Text	Surface strength category							
		Maximum pressure	Text	Maximum pressure category or maximum pressure value							
		Evaluation method	Text	The evaluation method used							



Institutional significance and potential benefits

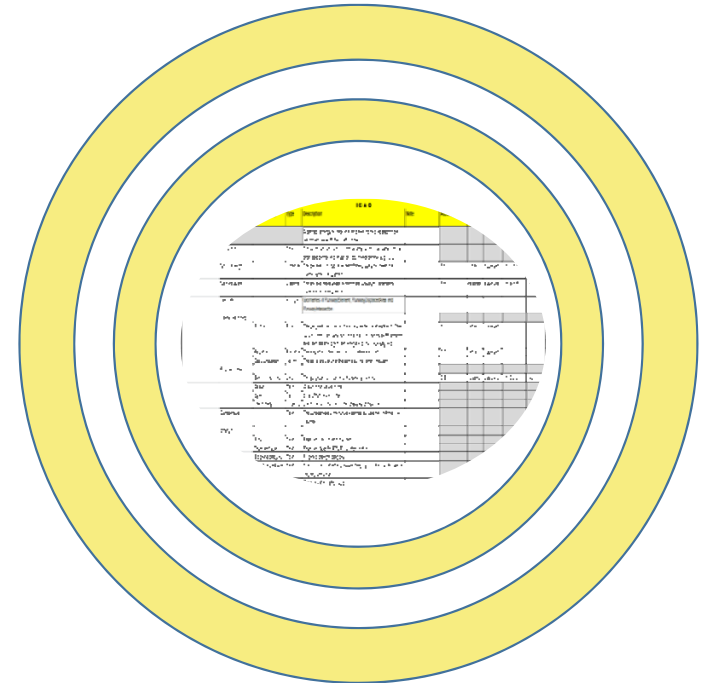
Expand the DC for own needs

- New columns can be added to the table.
 - *For example: "Fit for IFR /VFR"*
- New additional properties can be added.
 - *For example: "Registration number"*



Expand the DC for own needs

- New DQR could be defined for specific purposes.
 - *For example: more stringent DQRs could be defined for IFR data*
- List of values for code lists can be expanded.
 - *For example: Aerodrome/Heliport, Type of traffic permitted can include "GA", "CIV", "MIL", and others as needed*



Expand the DC for own needs

- The current DC is at international level, as published under ICAO (PANS).
- “Own” could mean national or regional level.
- Both States and regions could add their requirements as to fit to their own need in terms of:
 - *aeronautical data origination and publication and*
 - *common language for data originators and AIS organization.*

ICAO implementation mean

- As published by ICAO, the Data Catalogue has no strict implementation mean.
- The Excel tables provided represent just a container for the text information and are not an implementation mean.



ICAO Digital Data requirements

- *“Globally interoperable aeronautical data and aeronautical information exchange models shall be used for the provision of data sets.” (Annex 15, Ed.16)*
- PANS-AIM defines requirements on:
 - aeronautical information model used,
 - aeronautical data exchange model,
- No specific model is mentioned.

ICAO DC Implementation

- As Data sets are based on DC elements, the implementation of the DC should support their generation.
- Possible methods:
 - MS Excel,
 - Update of the current static databases to support the DC, or
 - Specific software development.

Muchas gracias por su atención

