Liberté • Égalité • Fraternité
RÉPUBLIQUE FRANÇAISE

dgac Service de l'Information Aéronautique
DSNA

DGAC - SIA

FAQ English

XML data sets from AIP database

SIA/SOP/ETU
20/10/2020

Table des matières

Introduction

To proper use this document, be sure you don’t use it directly in his compressed form. First unzip it.

At each AIRAC cycle, the SIA (Aeronautical Information Service in France) proposes to customers two exports files of aeronautical data for Metropolitan France and overseas territories and departments

Datasets included in the .zip file

Export XML-SIA

This file is used as input for the tools ACADEMIC, GeodEasy, GeoTitan and also for producing "big size" charts by the SIA.

This export is not likely to evolve, its structure is fixed. To facilitate its use, a detailed presentation is available (only in French) here.

Export AIXM 4.5

The AIXM format (Aeronautical Information Exchange Model) is the european standard in force for aeronautical data exchanges. The version here proposed is the 4.5.

The documentation related to the AIXM 4.5 exchange standard is available here.

A description of the tables here and a graphical representation of the model here.

Aeronautical Data Catalogue

The Aeronautical Data Catalogue presents the scope of data and information that can be collected and maintained by an AIS organization.

Here is the user manual in French language

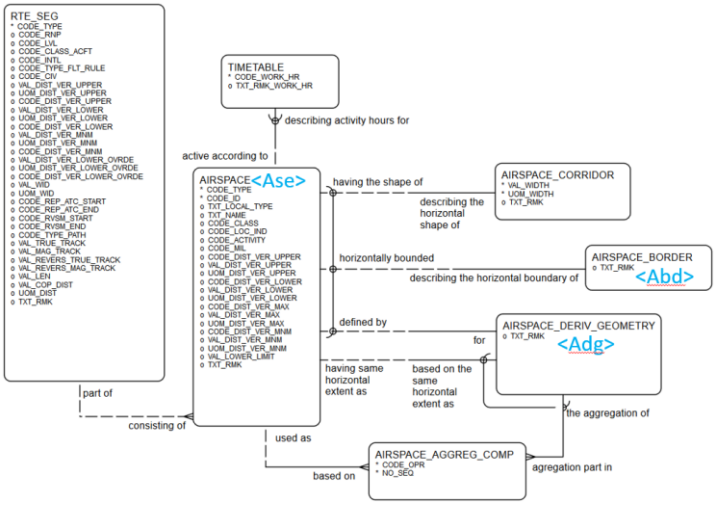
To find some help on the topics below, just click on the button.

You also can find some help on airspace type here.

How to retrieve information about Airspaces?

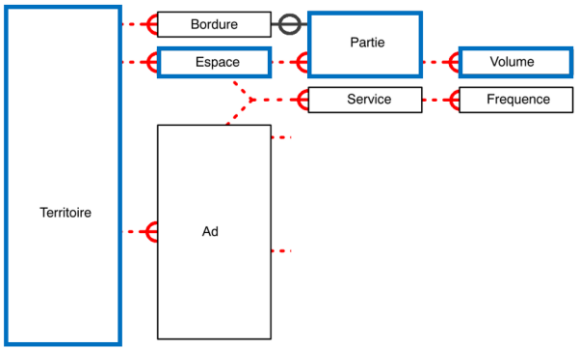
- **AIXM 4.5 :**

In addition to the documentation relative to the AIXM 4.5 exchange format, a list of the Airspaces is contained in the **<Ase>** entity (which is relative to an Airspace). The Airspace horizontal geometry is described in the **<Abd>** (AispaceBorDer) entity (coordinates are written as DDMMSS.SS without using the °, ‘ or “ symbols).



- **XML-SIA :**
  file :

The description of the entities as well as their relationships are available for consultation in the siaexport.pdf



- **<Espace>** = **<Airspace>** : general information (name and type)
- **<Partie>** = **<Parts>** : parts of airspaces (geometry and information)
- **<Volume>** = **<Volume>** : characteristics associated with the vertical division of airspaces (lower and upper limits).

How to select an Airspace type?

As a prerequisite, please consult the “How to retrieve information about Airspaces?” chapter, above.

Airspace types are encoded as follows:

XML-SIA Code	Definition	AIXM 4.5	
		<codeType>	<txtLocalType>
ACC	Area Control Center	D_OTHER	ACC
CTA	ConTrol Area	CTA	
CTL	Control	CTL	
CTR	Controlled Traffic Region	CTR	
LTA	Lower Traffic Area	D_OTHER	LTA
OCA	Oceanic Control Area	OCA	
S/CTA	CTA (military)	S/CTA	
S/CTR	CTR (military)	S/CTR	
TMA	TerMinal control Area	TMA	
UAC	Upper Area Control center	D_OTHER	UAC
UTA	Upper Control Area	UTA	
FIR	Flight Information Region	FIR	
SIV	Flight Information Sector	D_OTHER	SIV
UIR	Upper flight Information region	UIR	
AER	Recreational activities Model aircraft flight	D_OTHER	AER
BAL	Recreational activities Captive balloon	D_OTHER	BAL
PJE	Recreational activities Skydiving	D_OTHER	PJE
TRLPLA	Recreational activities – winch-assisted glider launch	D_OTHER	TRLPLA
TRLVL	Recreational activities winch-assisted free flight launch	D_OTHER	TRLVL
TRLPVL	Recreational activities winch-assisted glider & free flight launch	D_OTHER	TRLPVL
VOL	Recreational activities aerobatics	D_OTHER	VOL
CBA	Cross Border Area	CBA	
D	Danger area	D	
P	Prohibited area	P	
ZIT	Temporary prohibited area	D_OTHER	ZIT
R	Restricted area	R	
ZRT	Temporary restricted area	D_OTHER	ZRT
PRN	Parks and natural reserves	D_OTHER	PRN
SUR	Sites with distinctive marks prohibited for low altitude overflight	D_OTHER	SUR
NAV	Radio Navigation aid (outside aerodrome vicinity)	NAV	
FBZ	FPL Buffer Zone	RAS	FBZ
RMZ	Radio Mandatory Zone	RAS	RMZ
RMZ-TMZ	RMZ and TMZ	RAS	RMZ-TMZ
TMZ	Transponder Mandatory Zone	RAS	TMZ

- **AIXM 4.5 :**

Go to the **<Ase>** entity tab, filter by attribute using **<codeType>** and **<txtLocalType>** when necessary, depending on the table used.

The airspaces which type is not defined in the AIXM-4.5 standard are coded <codeType>D-OTHERS. The attribute <txtLocalType> is used to precisely define the type of these airspaces.

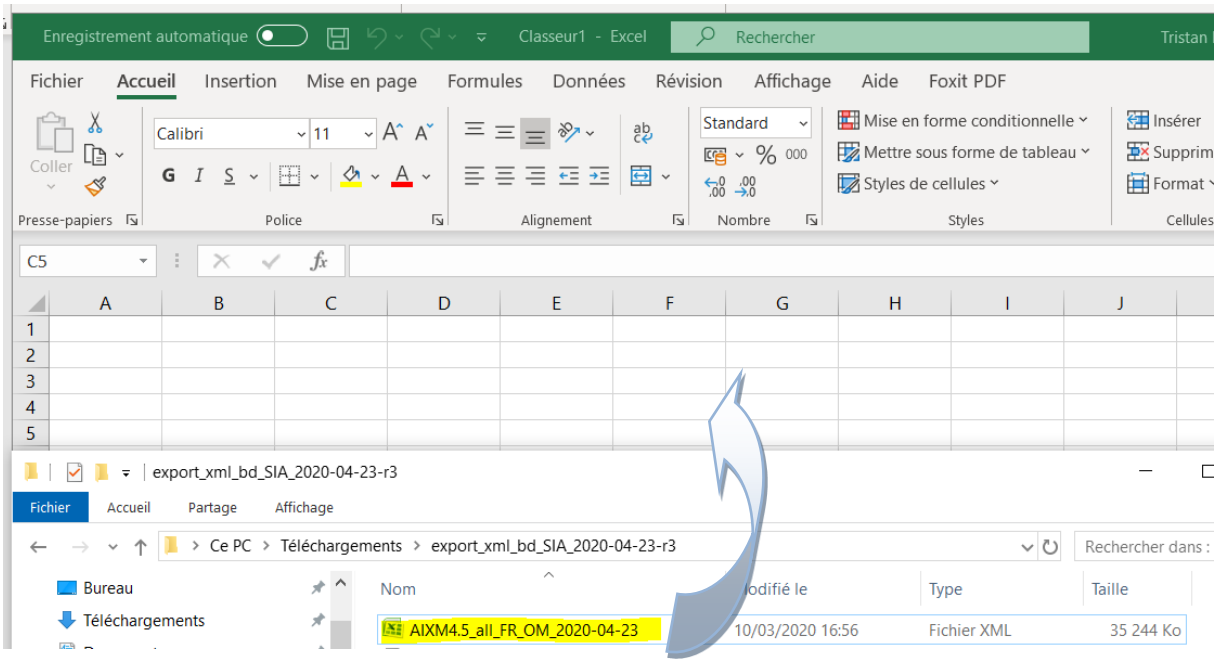
- **XML-SIA :**

Go to the **<Espaces>** entity tab, filter by attribute using **< TypeEspace>.** Codes as defined in the table above.

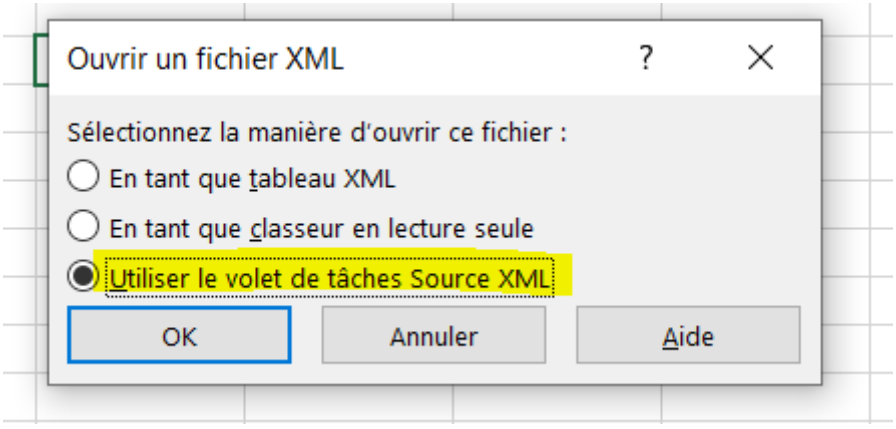
How to import the XML files into an Excel sheet ?

Opening an XML file in Excel

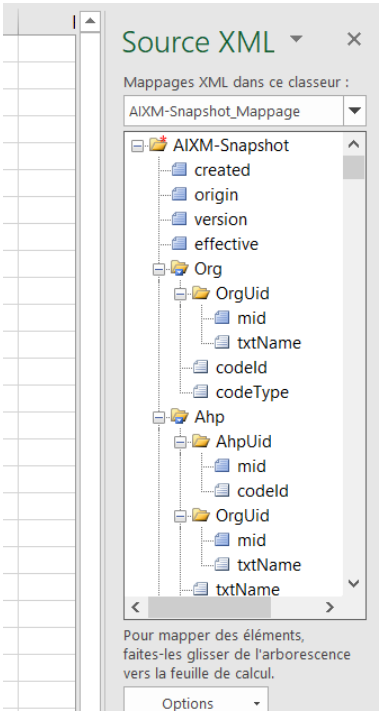
- Open a new Excel file
- Select the desired XML file, then drag-and-drop it into the Excel sheet :



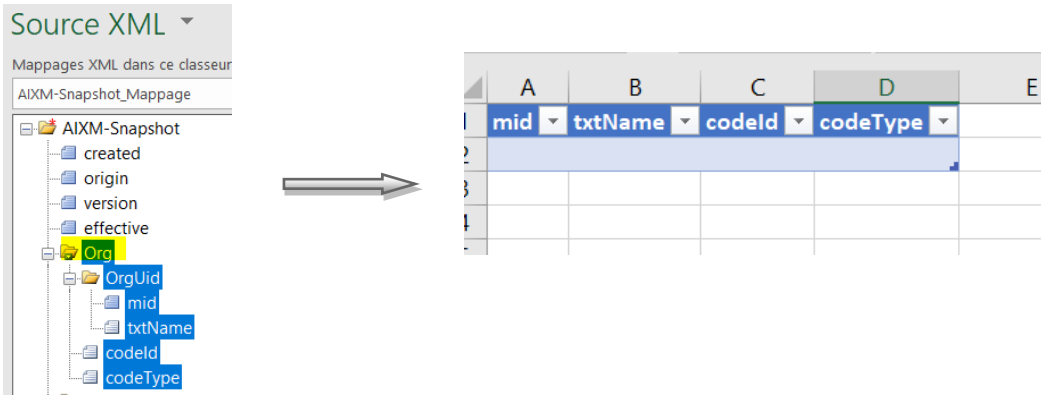
- After the XML file has been dropped, the following dialog box will appear. Select the last option “Use the XML Source task pane” :



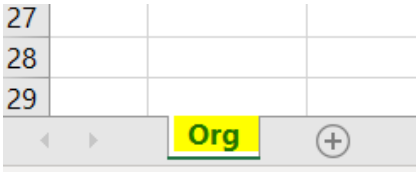
- A tree view like the one below will appear on the far right end side of the Excel sheet :



- Select an entity, its attributes will automatically be selected, then drag-and-drop the selected entity into the A1 cell :



- Rename the tab using the name of the selected entity :



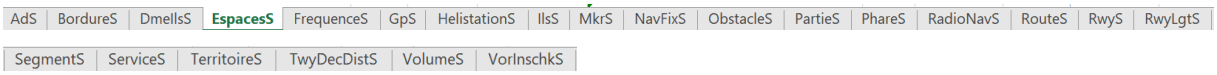
- To make the data appear, right click on the empty table and select “Refresh” :

mid	txtName	codeId	codeType
1520776	POLYNESIE FRANCAISE	NT	O
1520778	ALGERIE	DA	O
1520780	ALLEMAGNE/SUISSE	ED-LS	O
1520782	ST PIERRE ET MIQUELON	LF	O
1520784	ALLEMAGNE	ED	O
1520786	ALLEMAGNE/LUXEMBOURG	ED-EL	O
1520788	ANTILLES FRANCAISES	TF	O
1520790	REUNION	FM	O

- Open a new tab and repeat the same steps with the next entities :

AIXM 4.5 entities list :

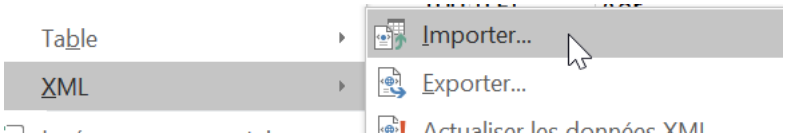
XML-SIA entities list :



How to update data formatted in Excel ?

To update an Excel file with the last version of the AIXM 4.5 or XML_SIA export file :

1. **Open** the Excel file
2. Mouse over a data cell (typically, the second line of a tab)
3. After right clicking, choose XML



4. **Import** the desired version of the file you want to import (select XML_SIA_20XX-XX-XX.xml to access the XML-SIA file and AIXM4.5_all_FR_OM_20XX-XX-XX.xml to access the XML AIXM 4.5 file)
5. **Save under** the Excel file and rename it using the effective date if needed.

What is the AIXM 5 data model ?

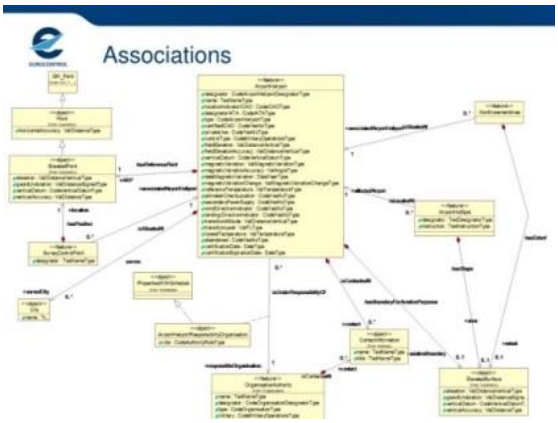
More information is available on the official AIXM website :

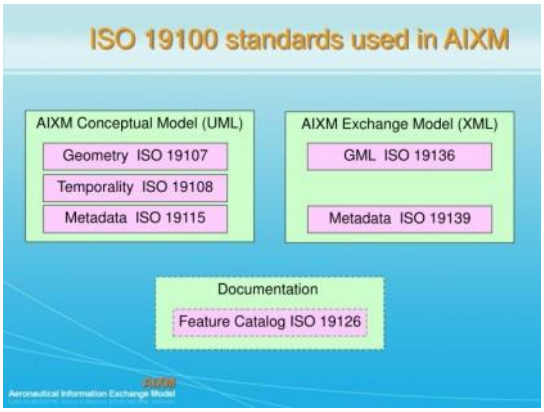
http://www.aixm.aero/

http://www.aixm.aero/page/aixm-51-511

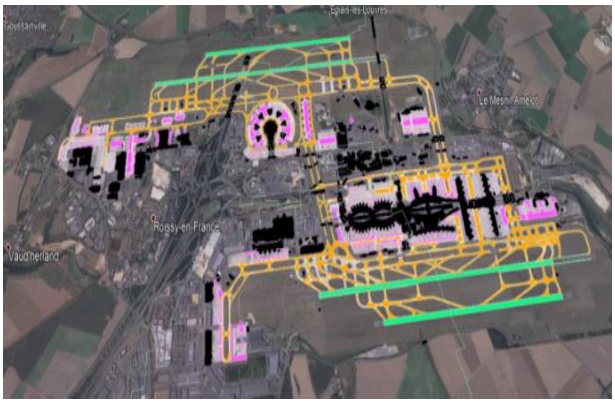
https://ext.eurocontrol.int/aixm_confluence/

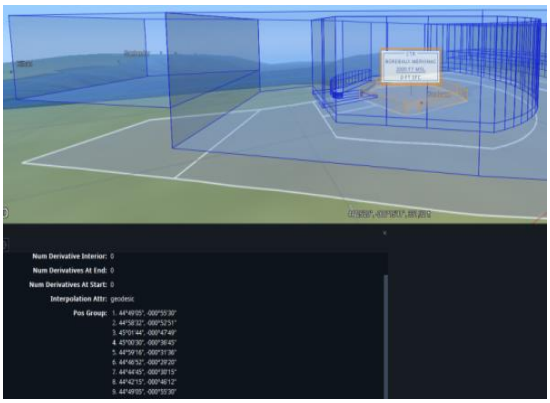
The AIXM 5.1 model encapsulates the entirety of the aeronautical data spectrum. Based on GML (Geography Markup Language), it enables a more comprehensive representation of the geometrical data objects as well as improved compatibility with professional GIS softwares.





The model enables the visualization of 2D and 3D data in specialized softwares. Below are a 2D visualization of Roissy-Charles-De-Gaulle airport's infrastructure (on the left hand side) and a 3D visualization of Bordeaux's airspaces using height datum (on the right hand side).





Where can one find examples of XML files using the AIXM 5 model?

On the website https://ext.eurocontrol.int/aixm_confluence/display/AIX/Overview

France and overseas AIP data is available on the webpage :
https://ext.eurocontrol.int/aixm_confluence/display/AIX/France

France

Créée par Utilisateur inconnu (astanca), dernière modification par Philippe BEAUDOIN le 19 mars 2020

SIA - sample AIXM 5.1 live data-sets AIP and Obstacles

DSNA/SIA, the French AIS authority, provides two data-sets written in AIXM 5.1 format (Data-set AIP and Data-set Obstacles). These data-sets are issued from the french operational AIXM 4.5 database and converted to AIXM 5.1 with an automated conversion tool made by DSNA/SIA Research and Development team.

These files are only intended for evaluation or demonstration purposes. In no case, they may be used for operational use.

The AIXM 5.1 features elements concerned by these data-sets are listed below. The corresponding tables in the AIP are also mentioned.

Data-Set Obstacles:

- Obstacles for Area1 (VerticalStructure and ObstacleArea) AIP ENR 5.4

Data-Set AIP :

- Airports, Heliports and Landing Sites AIP AD 1.3, AD 1.8, AD 3.1
- Runway, RunwayDirection, CentrelinePoints AIP AD 2
- Airspaces, GeoBorder AIP AD 1.7 (RMZ, TMZ associated with VFR Airports or with foreign airports), AD 2.19 (CTR, TMZ, RMZ for each IFR airport), ENR 2.1 (UIR, FIR, TMA, CTA), ENR 2.2 (TMZ, RMZ outside airports), ENR 5.1 (P, R, D...)
- Navaid, VOR, DME, Tacan, NBD, VOR_DME AIP GEN 2.5, ENR 4.1
- DesignatedPoint AIP ENR 4.3

Please send us your feedback by e-mail to sia-innovative-projects@aviation-civile.gouv.fr

For demonstration purpose only. Not for operational use!

France_Overseas_AIP_DS_PartOf_20200130_AIRAC.xml AIRAC 02/20 (Publication Date : 19/12/2019 - Effective Date : 30/01/2020)
France_AIP_DS_PartObstacles_20200130_AIRAC.xml Data-Set Obstacles AIRAC 02/20

France_Overseas_AIP_DS_PartOf_20200227_AIRAC.xml AIRAC 03/20 (Publication Date : 16/01/2020 - Effective Date : 27/02/2020
) France_AIP_DS_PartObstacles_20200227_AIRAC.xml Data-Set Obstacles AIRAC 03/20

France_Overseas_AIP_DS_PartOf_20200326_AIRAC.xml AIRAC 04/20 (Publication Date : 13/02/2020 - Effective Date : 26/03/2020
) France_AIP_DS_PartObstacles_20200326_AIRAC.xml Data-Set Obstacles AIRAC 04/20

France_Overseas_AIP_DS_PartOf_20200423_AIRAC.xml AIRAC 05/20 (Publication Date : 12/03/2020 - Effective Date : 23/04/2020
) France_AIP_DS_PartObstacles_20200423_AIRAC.xml Data-Set Obstacles AIRAC 05/20