



CGx AERO in SYS presents



The context

GAIA Virtual Sky provides a platform for interoperability between Human-In-The-Loop simulators, along with collaborative services, designed to address the stakes and issues inherent to the future air transport system, throughout its lifecycle.

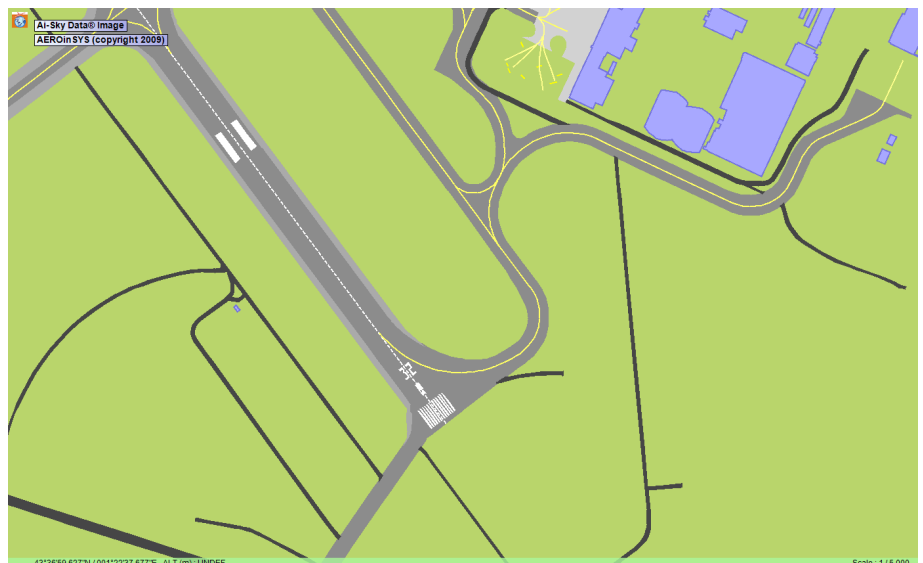
A taskforce group, taking advantage of their proximity in the Aerospace Valley have been jointly developing a European solution: Airbus, Thales, ENAC, DSNA, Steria, OKTAL, Intespace, Alticode and CGx AERO in SYS.

The need

Interoperability between simulators is the aim of the GAIA Virtual Sky project. This interoperability concerns both the offline and the online aspects of the simulation. A lot of data should be shared between the different participants upstream of a simulation:

- ATM data (including designated points, aero aids, ...)
- Airport mapping data
- DTM & obstacles
- Magnetic declination
- Meteorological data
- Mobiles modelling

These data are the context in which the simulation will be run. Divergences between two simulators may cause simulation failure due to a lack of realism. It is crucial to have process and specific tools enabling the data management.



You are working in use case "use case 1".

In this part of the website, you are able to manage the ATM datasets. You can also [create a new ATM dataset](#).

Here is the list of existing ATM datasets.

Import status	Id	Description	Details	Download	Upload	Edit	Delete	History
●	TEST							
●	Masi(1)							

Copy

téléchargement de fichiers

Vouslez-vous ouvrir ou enregistrer ce fichier ?

Nom : TEST.xml
Type : Document XML, 1,42 Ko
De : localhost

Ouvrir Enregistrer Annuler

Si les fichiers téléchargés depuis Internet sont Lilles, certains fichiers peuvent présenter des risques pour votre ordinateur. N'ouvrez pas ou n'enregistrez pas ce fichier si vous n'êtes pas sûr de son origine. Cliquez sur les risques ?

Our solution

1) Reference data definition:

Using the AIXM standard for aeronautical data management, the users are able to define, edit and share a reference version of the data. This AIXM data is can be uploaded, downloaded and displayed using a website.



You are working in use case "use case 1".

- Home
- Use case service
- Environment data
- ATM
- Criticality
- + Manage

You are locking this criticality matrix. You can [release the lock](#).
 Go back to the [filter selection](#).

Zone: **Zone1**

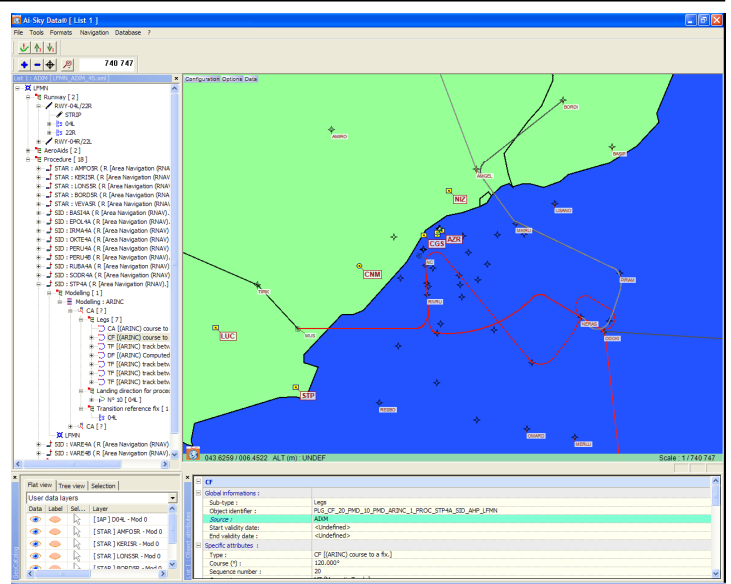
	Sim1	Sim2	Sim3
ATM			
Aerodrome			
Aerodrome description			
Aerodrome basic description	C	C	NC
Aerodrome advanced description	C	UKN	NC
Aerodrome landing surface			
Runway basic description	C	UKN	NC
Runway advanced description	C	UKN	NC
Runway geometry	C	UKN	NC
Stopway	C	UKN	NC
Aerodrome moving & parking surface			
Pushback surface	C	UKN	NC

3) User data checking using Ai-Sky Data®:

A user does not have to share his/her own data with other users. Only a consistency report has to be shared. CGx AERO in SYS provides Ai-Sky Data® (a solution for aeronautical data processing, maintenance and exchange within different formats, such as AIXM, DAFIF, ARINC 424, GéoTITAN®) which can provide this report based on the criticality matrix, the reference data and the simulators data. It also provides data conversion if you want to convert the reference to your own proprietary format.

2) Critical data inventory:

Because each use case is unique, you can specify, using a multi-dimensional collaborative matrix, the geographical zones, the data family and the simulators in which data are critical. This is done using a collaborative website.



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You are locking this criticality matrix. You can [release the lock](#).
 In this part of the website, you are able to manage the consistency reports associated to a criticality matrix.
 Here is the list of simulator instances, with three consistency report.

Name	Uses reference as input	Status	Upload report	View & edit	Consistency reports history
Sim1	False	Yellow	Green	Blue	Blue
Sim2	False	Green	Green	Blue	Blue
Sim3	False	Grey	Green	Blue	Blue

Some XML schema files (xsd) are available: [criticality matrix schema](#), and [consistency report schema](#).

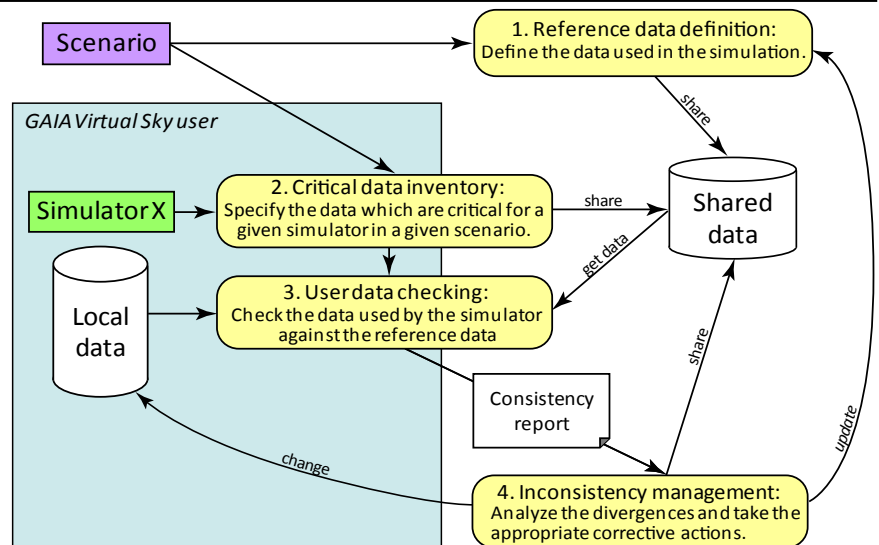
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4) Inconsistency management:

When a user reports a divergence, all the partners can use a comment system and decide if it is acceptable or not to play the simulation. The report can be edited online. A consistency summary with graphical indicators gives a quick overview of the current situation. A detailed process is available to manage the rejected divergences.

Solution overview

In close collaboration with the GAIA Virtual Sky partners, CGx AERO in SYS offers a collaborative service to GAIA Virtual Sky users, with a toolset based on a four steps process.



Contact us

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CGx AERO in SYS also provides services and software to assist you in the preparation of the data for your simulation means (either ATC or aircraft). If you are interested to deploy this solution in your particular context, do not hesitate to contact us.

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