



Airspace Integration Award 2023

ENAIRe, recognised for a project that will allow airspace simulation studies to be automated

- During Airspace Integration Week, in Madrid, ENAIRe is praised for its commitment to digitising the information used in airspace volume simulations
- This initiative will streamline and automate data collection for simulation studies on airspace capacity
- The centralisation in a repository of all the information extracted once this initiative is launched will make it possible to automate the processes involving the information extracted from simulations

Madrid, 27 September 2023

The NOTE application (acronym for ATC Activity Data Notation for complexity Analysis) by ENAIRe was acknowledged at the Airspace Integration Awards 2023 during Airspace Integration Week in Madrid.

ENAIRe designed NOTE as a support application for automating the data collection required in simulation studies of airspace volume capacities.

The correct description and annotation of the information managed in air controller workstations is essential to be able to automatically feed the simulation tools that ENAIRe uses to assess workloads and estimate the capacity of airspace sectors.

This is how NOTE emerged, as a tool for collecting air traffic control (ATC) data assisted by a predictor that estimates the tasks needed to manage air traffic based on its evolution according to the traces extracted from the surveillance radar information.

This information can be used, in whole or in part, without citing the source.

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As this application evolved, its uses have been expanded far beyond its original intent and, outside the scope of simulation, to other key functions such as operational validations or training. It also provides a centralised database of the air traffic control activities and tasks at ENAIRe.

Data is collected for each air traffic controller workstation by recording the exact second in which the controller would perform the action, previously suggested by the predictor, or by providing those actions that may not have been anticipated.

The advantages and possibilities of the NOTE application for ENAIRe include:

- **Training of non-controller personnel.** It makes it possible to learn the nature of air control both by displaying the sequence of tasks carried out by control to manage aircraft in a specific traffic scenario, and providing use cases for recording ATC activity.
- **Monitoring of air traffic control activity** in real time to evaluate work load.
- **Real-time assessments** to support the evaluation of new operating modes, as it allows for agile data collection in the various control stations.
- **It enables data capture**, provides knowledge and experience in characterising and analysing ATC activities and tasks.
- **It provides a centralised repository of information** from different sources, whether manual, automatic or simulated, which can be used to analyse data en masse in anticipation of automating processes through the integration of information and learning.

ENAIRe's NOTE application allows recording and annotating the air traffic control activity of any function associated with a controller's workstation, both in positions associated with airspace control sectors and airport control.

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About ENAIRE

ENAIRE is the air navigation service provider in Spain.

As a company of the Ministry of Transport, Mobility and the Urban Agenda, it provides en route control services for all flights and overflights from five control centres in Madrid, Barcelona, Seville, Gran Canaria and Palma, as well as approach services to every airport in the country.

In addition, 46 airports receive ENAIRE's communication, navigation and surveillance services, and 21 airports, including the country's busiest, rely on its aerodrome control services.

ENAIRE is Europe's fourth largest air traffic manager and participates in the A6 Alliance, a coalition of air navigation providers responsible for over 80% of European air traffic, and which is seeking to modernise the air traffic management system. It is also a member of other international alliances promoting the Single European sky, such as SESAR Joint Undertaking, SESAR Deployment Manager, ITEC, CANSO and ICAO.

ENAIRE, as the agency appointed by the Ministry of Transport, Mobility and Urban Agenda to implement the U-space system in Spain, will be the provider of the Common Information Services (CIS), which are essential for administering U-space services to drones and Urban Air Mobility, in interaction with local air traffic control services, so that all types of aircraft can fly safely in the same airspace.

ENAIRE has received the highest score in Europe on the aviation safety key performance indicator. It has also been awarded the EFQM 500 Seal for its safe, efficient, innovative and sustainable management of air navigation services.

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