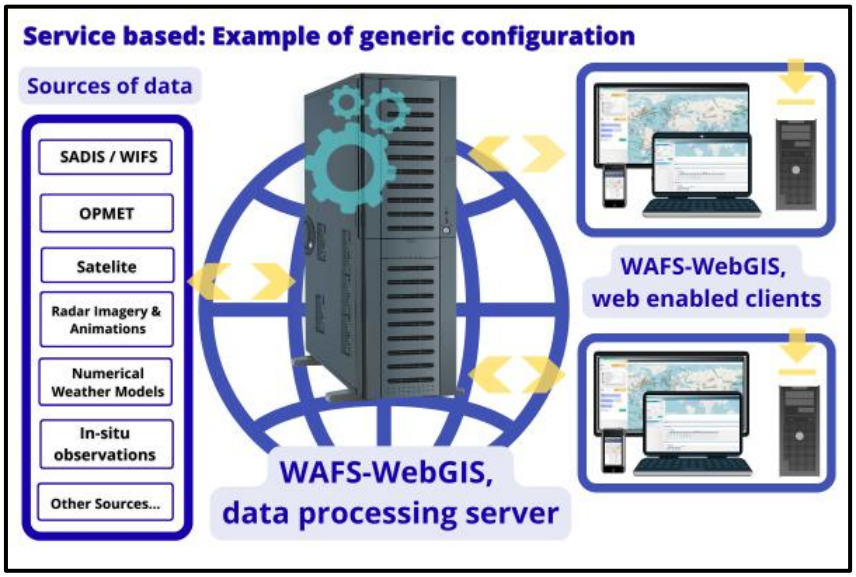
WAFS-WEBGIS

Info-Electronics Systems Inc. (IES) developed the WebGIS package as a generic viewer and handler of geographic information for Environmental applications. The package supports multiple data sources and is customizable to a variety of customer applications by integrating a wide range of functionalities for data handling, processing, rendering, and display.

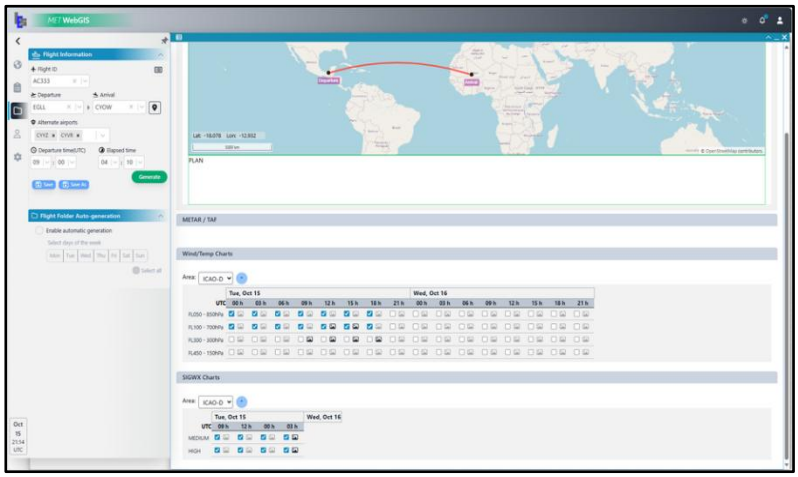
WAFS-WebGIS is based on the WebGIS package. It can be set up as a Decision Support System for weather-related aviation assistance. WAFS-WebGIS has been assessed by the UK-Met SADIS authority, which has certified its passing and full compliance with the criteria set forth in the SADIS FTP workstation software evaluation.



FLIGHT PLAN MODULE

Designed specifically for pilot flight weather briefing, it provides easy access to critical aviation weather products, including up-to-date weather conditions for flight take-off and forecast for enroute conditions. Pilots can plan, store, and manage multiple flight routes with ease, all in one centralized location. Equipped with integrated mapping tools, automated flight folder generation, and easy sharing options, it is the pilot's all-in-one briefing tool for safe and efficient flight operations.

Additional information available on Page 3 of this Brochure.



FEATURES

- Interfaces with SADIS of the UK Met Office and WIFS of NOAA's National Weather Service.
- Supports GIS layer for map background customization.
- Simultaneous reception, display, and print capability.
- Handles Bulletins, PNG Charts, BUFR, GRIB/ GRIB2 data.
- Aviation charts; SIGWX, Wind-temp, etc.
- Queries in TAC and ICAO's IWXXM format from METAR and SPECI, TAF, SIGMET, and AIRMET.
- Selective reception of user-defined products & Alert Message for user-specified products.
- Display vertical Cross-Section along a route.
- Distribution of Web-enabled products.
- System Monitoring as described later below.
- We have added Enhanced user Management.
- We provide hodograph and Tephigram capability.
- Very strong capability (described below) to manage Flight Folder.
- Product Archival.

ADDED CAPABILITIES

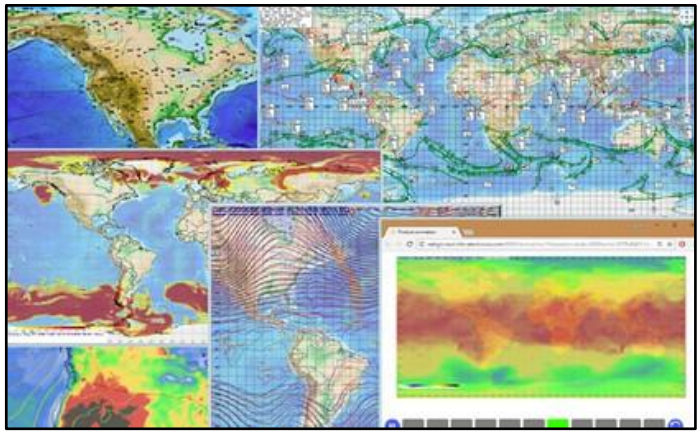
- A 3-D Module can be added to show certain products in 3-D. For example, the invisible turbulence can be made visible by adding 3-D viewing.
- Collaborative production of products. If required, we can provide the capability for two meteorologists working at different airports to collaborate and produce products collaboratively.
- Satellite and Radar Imagery, if required, can be added. However, the source of these products must be provided by the client.

OPMET DATA RETRIEVAL

Report types, TAF, METAR, and SIGMET are retrieved, decoded, and displayed in tabular and graphical formats. Decoded data can be compared against a specified condition to extract only the reports meeting that specified condition (e.g. visibility less than five miles). In addition, decoders for UA, and FT type reports can be provided. Pattern matching can also be defined and applied to the database to generate warnings

BUFR DATA

The BUFR data are received and decoded to reproduce the T4 equivalent files of significant weather charts. These products are meant to replace the T4 charts and to allow the user to focus their charts on the exact area of interest. All required projections, zooms and weather symbols are supported.

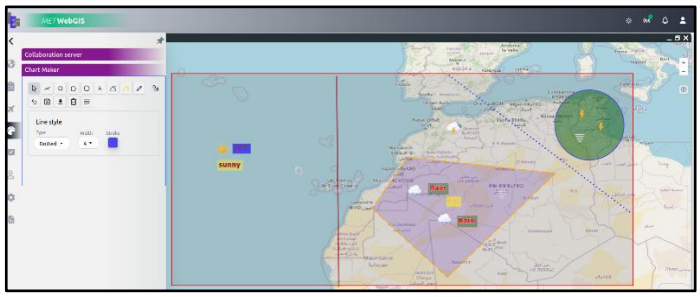


GRIB2 DATA

Fields decoded from GRIB data may be displayed on a map background as raw data, contours, wind barbs, or arrows in various colors and line styles. vertical cross-section display and plotting from GRIB data are also generated.

CHARTS VIEWER

The PNG charts viewer allows the user to display the WAFS T4 charts and perform the basic functions such as zoom, rotate, crop, annotate and print.



UPPERAIR PLOTTING

The Skew-T and Hodograph applications are available for UPPERAIR data display and printing.

DECODED DATA ON MAP

The decoded data may be displayed on a map background as values or as station models using international symbols. Analysis of randomly spaced data is also available

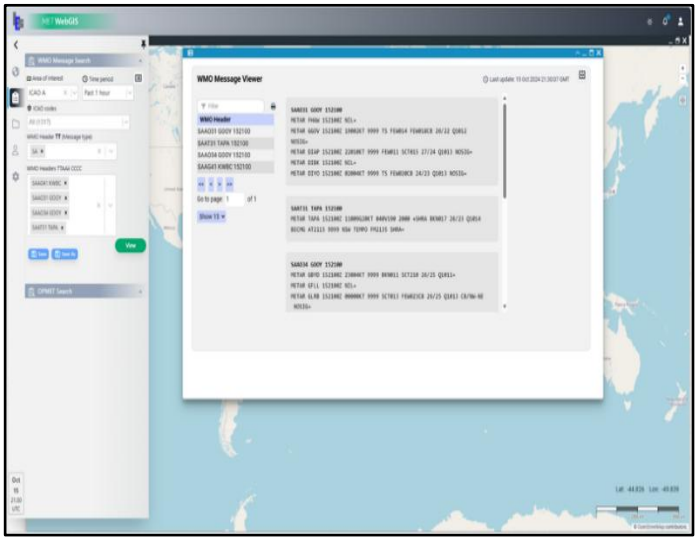


SYSTEM MONITORING

Designed to give you complete visibility into the performance, monitor certain metrics, detect anomalies, and receive real time alerts to address potential problems before they impact your operations.

IWXXM MODEL

Supports the new IWXXM format introduced by ICAO and made available on the SADIS and WIFS dissemination services. Our system handles the decoding, ingestion, and display of the new format alongside the TAC (Traditional Alphanumeric Code) form of data seamlessly.



INFRASTRUCTURE

Clients have two options to choose from regarding their system configuration:

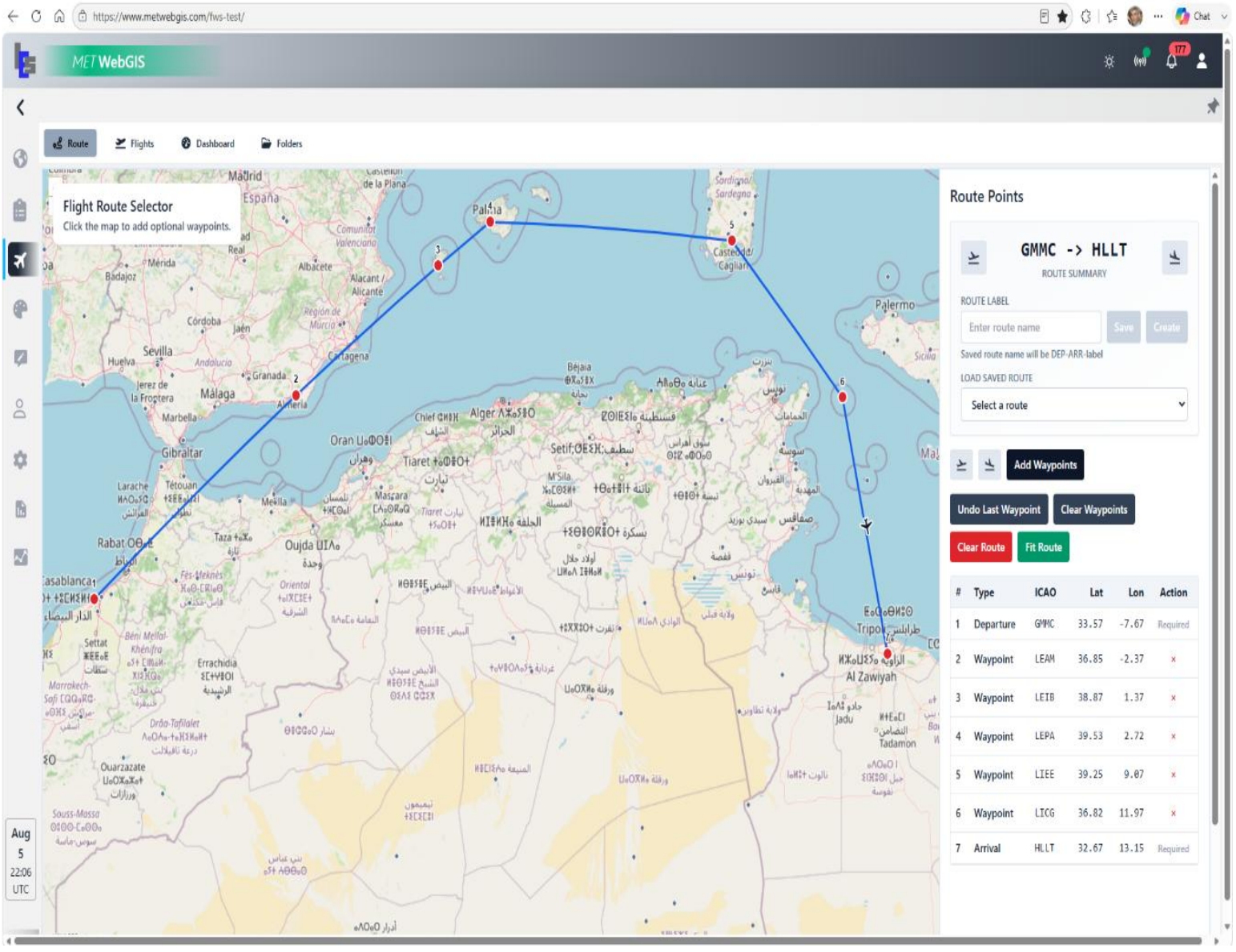
Local: The customer hosts the server and manages the data locally on the premises.

SaaS: Subscribes to a monthly service hosted in the cloud.

ADDITIONAL INFORMATION ON FLIGHT FOLDER

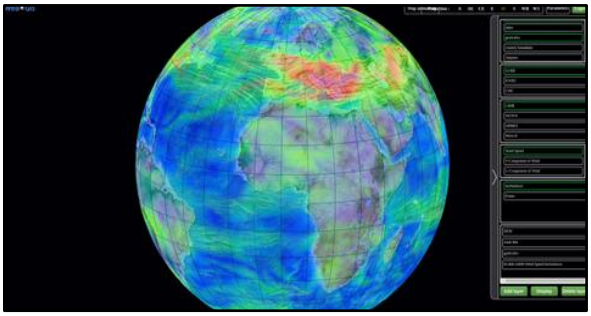
The IES **WAFS-WebGIS** has a very powerful **Flight Folder** which lets you create, customize, generate, schedule and distribute Flight Folders.

1. A Flight Folder brings together selected operational & briefing information for one flight in a PDF document.
2. It helps ensure the right information is prepared, reviewed, and delivered consistently.
3. The Route tab displays and manages Route information. Please see the diagram below.
4. The Flights tab allows you to create and maintain flight definitions.
5. Dashboard allows you to review the summary of the selected flight, text-based weather information, list of the flights for the current day, and weather briefing charts for the selected flight.
6. Folders tab allows you to create and maintain the PDF Flight Folder
7. It provides Briefing Document Management and Distribution capability.
8. It provides templates for Briefing Documents.
9. It lets you create and maintain flight information.



3D-RENDERING

3-D Capable Solutions



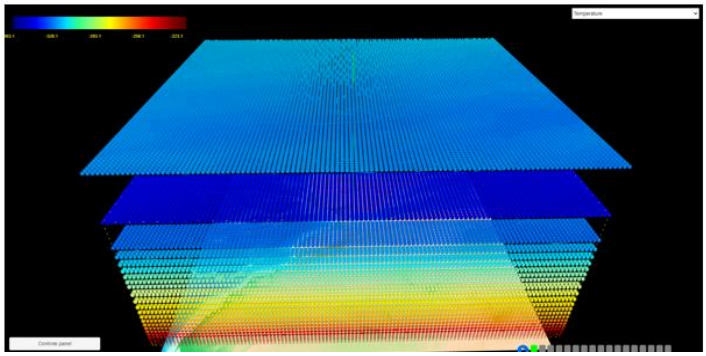
As an add on module, WAFS-WebGIS has a featured menu to allow the user to generate derived products from the GRIB data and display them in 3-D.

The **3D-Globe** module is suitable for assessing broad and global weather situations. This module allows the presentation of multi-source weather information as well as GIS thematic information on a Globe, with interactive pan and zooming on any location of the world and smart Level-of-Detail features. Globe makes it easier to use 3-D navigation and manipulation over the globe.

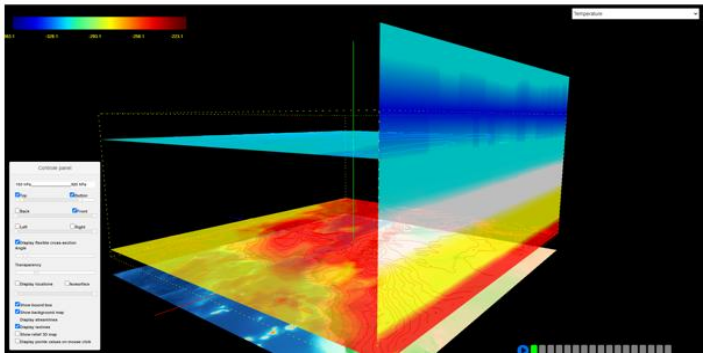
The **3D-Volumetric** module renders and interactively displays a selected column of 3D atmospheric information, with pan, zoom, rotate and pivot features, also performing surface cross-sections and animations in time, to appreciate localized, varying weather situations.

The bottom two diagrams show turbulence which is normally invisible and is made visible through some processing algorithms.

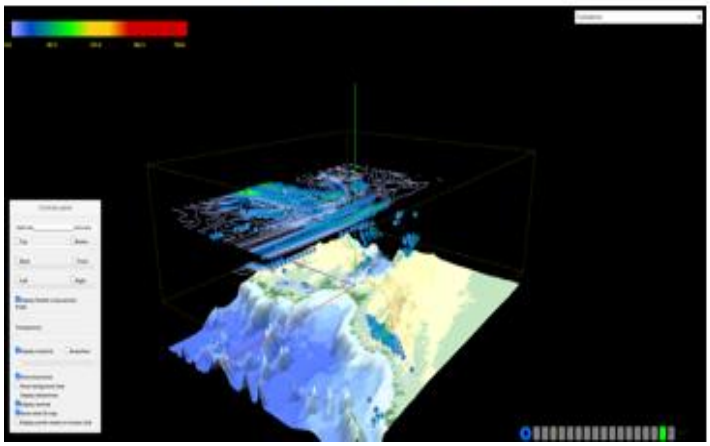
Cube of GRIB data



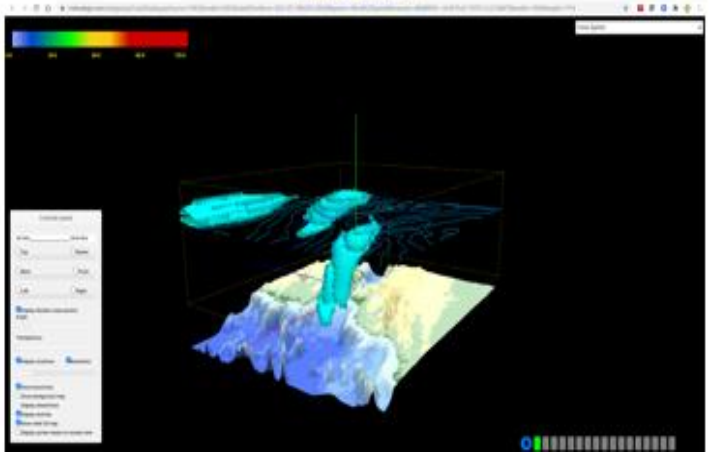
Isolines and isosurfaces rendering



Zone of turbulence derived from GRIB data



Jet illustration for aviation weather



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