

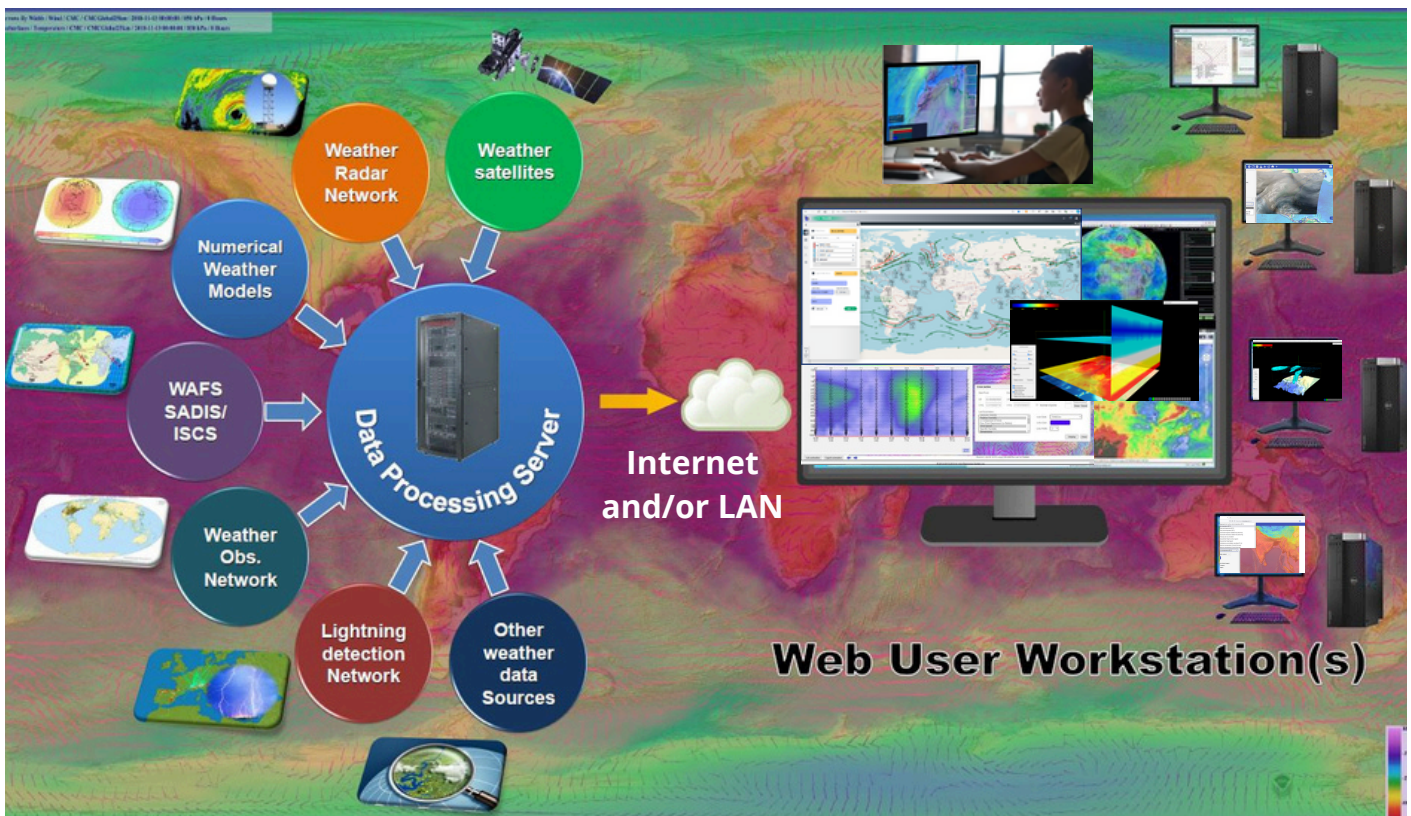
MET-WEBGIS

WEB BASED
INFORMATION
SYSTEM



INFO-ELECTRONICS SYSTEMS INC.

***...monitoring,
analysis, warning...
Decision Support System,***



ABOUT WEBGIS

IES package supports multiple data sources and is customizable

APPLICATIONS

Hydrology
Meteorology
Environment
Disaster Management

FUNCTIONALITIES

Data Ingest and processing,
Databasing, Visualization,
Analysis Tools, Web
Publishing

3D MODULE

3D Globe &
3D Volumetric
Cube

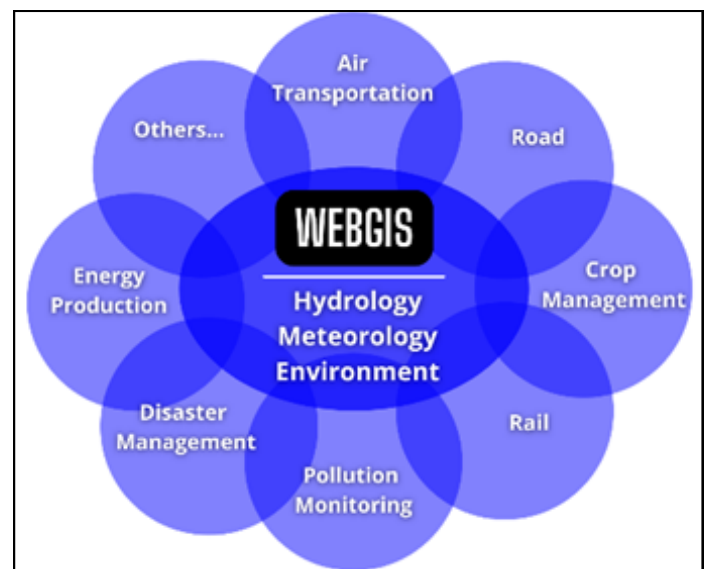
About WebGIS

Info-Electronics Systems Inc. (IES) has developed its WebGIS package to be a generic viewer and handler of geographical information-based data 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.

The WebGIS package has the capabilities to be set up as a Decision Support System for applications such as hydro-met events monitoring, disaster management, weather aviation assistance, etc.

Domains of Application

The WebGIS software has a variety of applications in the area of hydrology, meteorology and environment, where users need to display data from different sources and formats for weather conditions and events assessment, analysis, monitoring and tracking. The software package is also beneficial for other industries that require usage of environmental conditions such as road, rail, marine and air transportation, disaster management, energy production and provision, crop management, pollution monitoring and many more applications. The WebGIS software supports the visualization of the observed or forecasted information in its geographical context. It also allows the user to introduce ancillary layers of information from the available GIS database for further thematic assessment and more specialized analysis.

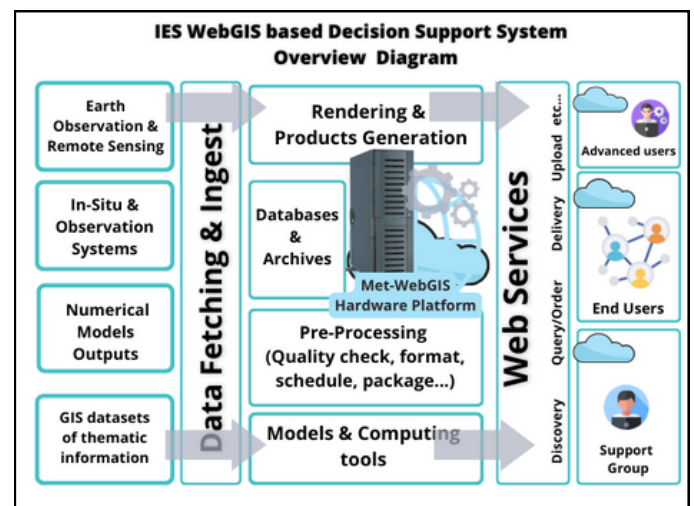


Generic Functionalities

The IES WebGIS software application supports the following main functions:

Data Ingest and Processing

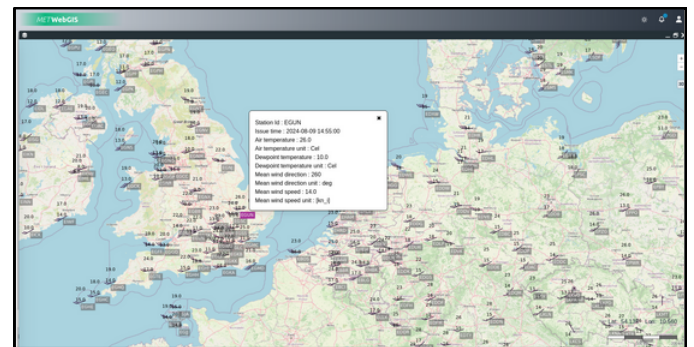
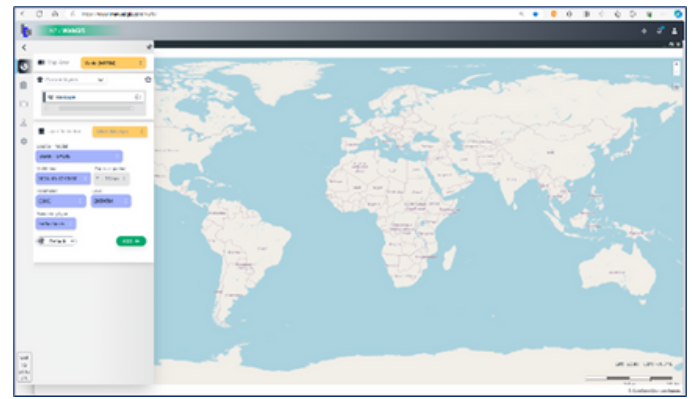
Allows the automatic fetch from the appropriate source at the appropriate frequency and the preprocessing of the data into uniformed types, such as points, polylines or images. This operation prepares the basic information layers that will be queried, rendered, displayed and distributed.



Databasing and Querying

Based on our long experience with geospatial and weather information databases, we designed a database structure that will accommodate all information, both dynamic, in relation to the application type, as well as static GIS data that could be used as ancillary information for product generation and analysis. The Graphical User Interface for queries interacts perfectly with the database and optimizes user selections and requests for product generation.

WebGIS can perform volcanic ash and tropical cyclone advisories, METAR and SPECI, TAF, SIGMET, and AIRMET queries in Alphanumeric Code (TAC) format as well as in extensible mark-up language (XML) and geography mark-up language (GML) formats, in accordance with the new ICAO Information exchange model (IWXXM).



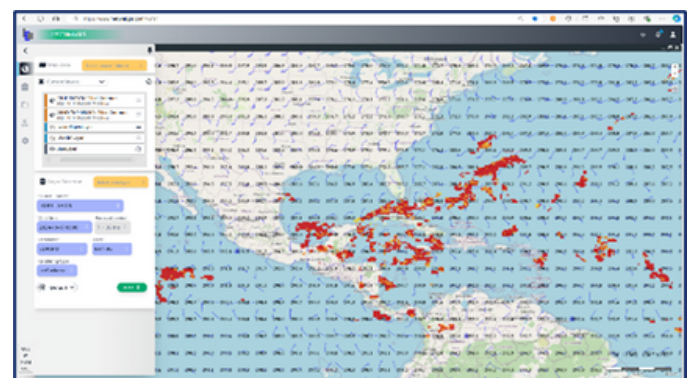
Rendering and Visualization

The rendering is based on open-source powerful libraries and utilities using a uniform design to handle files in both vectors and raster format. Furthermore, the WebGIS package uses the powerful Template and Macros concept to allow users to save products customized to their preferences and selections and the load them whenever required. The product generation could then be run in a reduced number of clicks or be scheduled in an automatic process.



Analysis Tools

WebGIS has a set of tools permitting the contextual analysis of the information. These tools allow the compilation of relevant layers of the information into derived products, which generate a second level of information required for advanced assessment, analysis, monitoring and decision-making.



Web Publishing and Distribution:

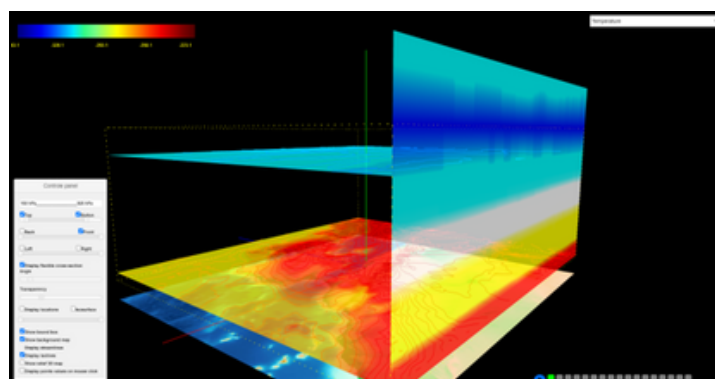
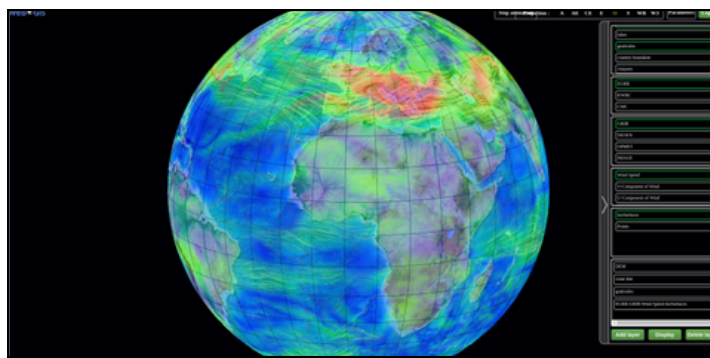
The WebGIS software is a web-based application and all generated products are web enabled. The Graphical User Interface runs from an ordinary browser and the access to all products is through the browser and an Internet connection.

The package also offers the appropriate product rendering for publishing and distributing images, .pdf reports and other possible formats, such as shape files and GML, depending on the products. The published product layout has all the relevant information for product identification and explanation, such as the data identification as well as the required legends and indexes.

3D Module:

The **3D-Globe** module is more suitable for assessing broad and global weather situations. This module allows to represent multi-source weather information as well as GIS thematic information on a Globe with interactive panning and zooming on any location of the world with smart Level-of-Detail's feature.

- Easy-to-use 3D navigation and manipulation over the globe.
- Details on demand, to eliminate cluttering presenting the important details initially.
- Integration of relevant data in a combined display (e.g., weather and terrain).
- Supporting animation of rendered products showing changing weather information in time.
- Rendering of Numerical Forecasting Model outputs in gridded point value or symbol, isolines and isosurfaces.
- Easy-to-use quantitative and information-retrieval tools to enhance the qualitative visualizations.



A **3D-Volumetric** module to render and interactively display, pan, zoom, rotate and pivot a selected column of 3D atmospheric information, performing surface cross-sections and animations in time to appreciate local and varying weather situations.

Data Infrastructure

Clients can choose between two main deployment options:

1. **Dedicated Server:** Purchasing the system and managing the servers locally, or
2. **SaaS:** Subscribing to a monthly hosted service in the cloud

For more information, please contact us at:

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