WAFS-METLAB2™ and BriefNet™: Weather Workstations

Functionality

Societal Impacts:

- Improved weather forecasting
- Safer aviation
- Capability for generating early warnings
- Pilot awareness of hazards
- Public awareness of storms and extreme weather

WAFS-METLAB2™ Features:

- Satellite, radar, lightning data integration
- Integrated display of weather analysis products
- Automatic product updates
- Custom alerts and alarms
- Consistent user interface across all modules
- Remote sensor data integration (e.g., profilers)
- Message composition
- Ability to create distinctive, value-added products
- Scalability and configurability to customer requirements
- Multiple window configurations
- Instant startup configuration
- Smart image layering for product assembly and comparison

BriefNet™ Features:

- Flight folders and documentation
- Automatic product and chart generation
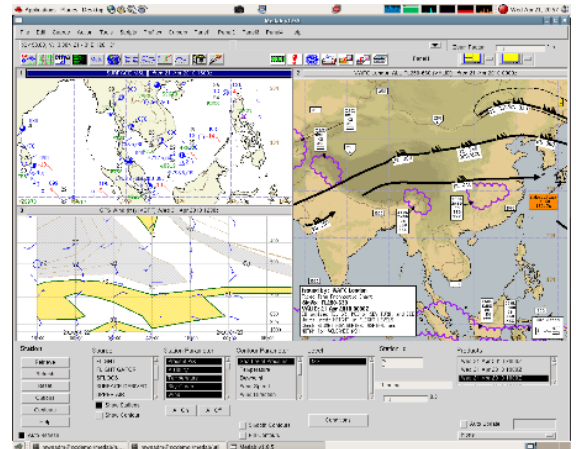- Web access
- Icing/cb/turbulence hazards

WAFS-METLAB2™ and BriefNet™ Overview

For more than 25 years, GST's Weather Group has developed and installed commercial meteorological and satellite data processing workstations in more than 35 countries. These professional weather tools help weather professionals process, organize, integrate, and view the data they need to make weather forecasts, ensure flight safety, manage water resources, and generate products. We have two excellent products that provide these features: WAFS-METLAB2™ and BriefNet™.

GST's **WAFS-METLAB2™** is an exciting way to visualize and process weather information. The WAFS-METLAB2 workstation is independent of any data source and can be installed standalone or used in a client/server configuration. The workstation integrates many sources of government and commercially available data, including World Area Forecast System (WAFS), Global Telecommunication System (GTS), international repositories of model data (NOAA, ECMWF, DWD), and other external sources, such as GST's DirectMet®2 GOES-R ground stations and Automated Weather Observing System (AWOS) networks. Optional modules are added to the WAFS baseline for satellite, radar, and lightning imagery.

WAFS-METLAB2™ has a robust data collection module that acquires WAFS data (WIFS, GIFS, SADIS) from file servers. The workstation is compliant with International Civil Aviation Organization (ICAO) Annex 3 regulations. Modules include alphanumeric data, numerical models, DIFAX, SigWx, time series, time profile, thermodynamic profile, and vertical cross-sections. Users can create overlays, folders, drawings, alerts, prints, and animations.

WAFS-METLAB2

Meteorology professionals use WAFS-METLAB2™ for detailed data integration as well as for defining areas of interest to trigger alerts upon data arrival. Users can create side-by-side comparisons of data products and then easily switch to alternate views that contain auto-updating product windows. Users can quickly change window configurations for different sector views as well as monitor conditions and imagery with automatic data updates. The emphasis on automatic product updating in display windows aids in monitoring changes in weather or flight conditions. Users can also personalize alerts and alarms via a popup dialog box upon the receipt of text bulletins (such as tsunami, volcano, and hurricane). Defined conditions, such as the ability to specify an area of interest for parameter values to trigger alert conditions, can also be set to alert the user. Users can create custom startup profiles of the products they wish to view upon starting WAFS-METLAB2™, including the capability to establish multilayer overlays or views of specific geographical areas with the click of a mouse. User profiles can be created, saved, and reloaded at any time, personalizing WAFS-METLAB2™ for specific forecaster tasks. The workstation includes a comprehensive macro facility for customized overlays of the different data input and also has a GRIdded Binary (GRIB) generator (GRIBGEN) that produces additional derived parameters beyond those included in the traditional GRIB datasets.
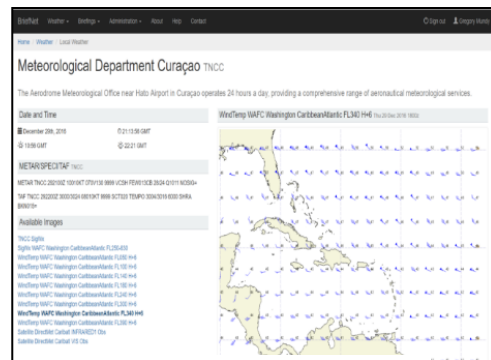
BriefNet

BriefNet™ is a companion subsystem added to WAFS-METLAB2™ for automatic chart production, web access, and web briefings. BriefNet™ is the data processing and production engine that provides in-house analysis and then extends it to internal and external users via web and Internet access. It also includes a module for on-demand production of flight folders or general briefings, which can be disseminated via the Internet for remote users.

BriefNet™'s flexibility and ease of use support a wide range of weather professionals in the commercial, government, and military markets by alerting users to warning conditions or the arrival of warning bulletins such as volcanic ash or hurricane.