aero weather

The complete pre-flight
documentation fast and easy

Migration to IWXXM

Just **print & go**

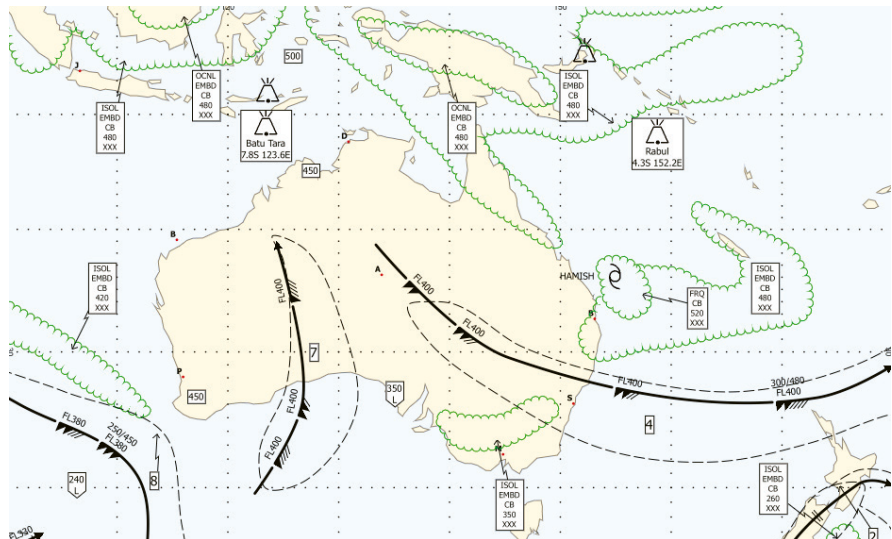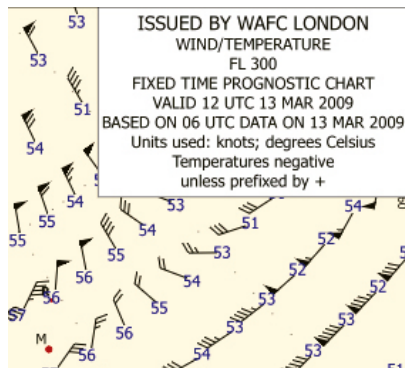ibl weather software solutions

OVERVIEW
your flight briefing system

Aero Weather is an integrated system for reception, processing, and representation of meteorological data for purposes of flight briefing, featuring an easy production of pre-flight information bulletins.

MAIN FEATURES

- Internal operational meteorological database system
- OPMET report and bulletin database browsing and access
- Filter-based warning browsing and access
- Warning pop-up notification
- SIGWX BUFR decoding
- GRIB & GRIB2 decoding
- Printing module
- Automatic Batch Production module
- Built-in standard aviation charts
- Built-in WAFC GRIB fields charts
- User-friendly and intuitive graphical interface
- Accessible through a Web Portal with user access control
- Conversion of METAR/TAF/SIGMET/AIRMET/Advisories to IWXXM

ISSUED BY WAFC LONDON
WIND/TEMPERATURE
FL 300
FIXED TIME PROGNOSTIC CHART
VALID 12 UTC 13 MAR 2009
BASED ON 06 UTC DATA ON 13 MAR 2009
Units used: knots; degrees Celsius
Temperatures negative
unless prefixed by +

AUTOMATIC GENERATION OF WAFS WIND & TEMPERATURE AND SIGWX CHARTS

Aero Weather includes a module for automatic background generation of Wind & Temperature charts from GRIB and Significant Weather charts from BUFR for later display or distribution.

- Generated from GRIB fields (WAFS) or BUFR bulletins (SIGWX) automatically or for a given flight
- Generated for any area of the world, supporting the standard ICAO areas as well as the user-defined areas
- Support for both High level charts (SWH) and Medium level charts (SWM)
- Operates on data from both London and Washington WAFC centers and with global and local model data
- On-screen display features zooming facility

MESSAGE EDITING

Aero Weather features the creation of text messages through forms. It also includes the automatic insertion of interpolated and calculated values, automatic sending and scripting to design custom form templates, including TAF, METAR, SIGMET, GAMET, Windshear Warning and Aerodrome Warning.

TAF MONITORING AND STATISTICAL VERIFICATION

Aero Weather provides real time TAF Monitoring Service which compares TAF parameters with continuously received METARs and SPECIs for the desired set of airports. User is alerted if configurable TAF amendment criteria are met or severe weather phenomena occur. Aero Weather also calculates monthly forecast performance scores of monitored parameters for all or individual forecasters. This data can be exported into an Excel spreadsheet or XML file.

HIGHLIGHTS
## unique features

ADVANCED PRODUCTS

In addition to the standard WAFS and SIGWX charts, various other charts can be viewed and included in the Pre-Flight Information Bulletin.

Integrating data sources

Aero Weather processes data from various data sources, e.g. satellite imagery, radar imagery, lightning detection network, wind-profilers, etc. These data can be combined with the standard OPMET, NWP model and SIGWX data.

Aero Weather add-on modules allow create special value-added products to achieve higher "readability" of a weather forecast/situation. The products are based on:

- Mathematical computations on top of the original received data
- Special visualization methods – special products can be created by users or delivered by IBL as chart-templates

Metar Colour-State Chart

Satellite Imagery and Lightning

Wind-Shear Chart
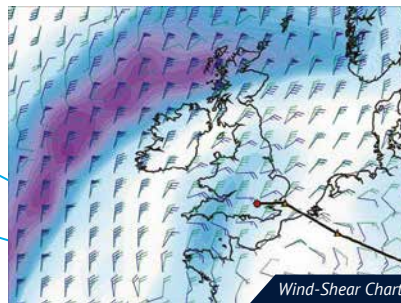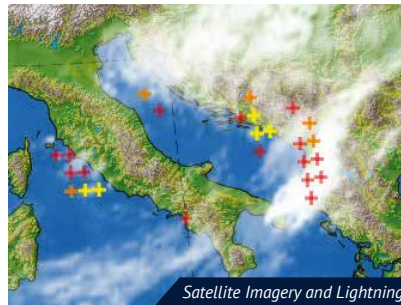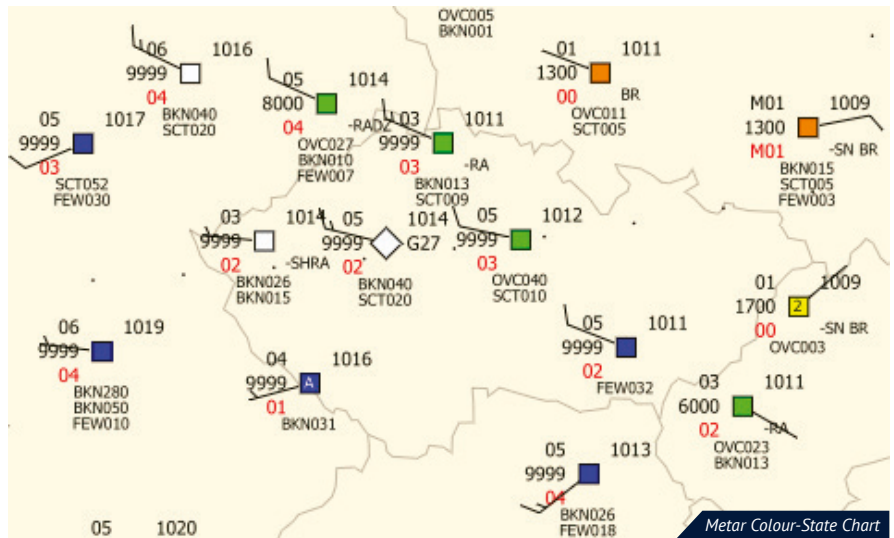
JOINED FORECAST MAPS FOR LONG-HAUL FLIGHT

In response to the demands related to the increasing number of long-haul flights, Aero Weather has implemented an experimental feature: the joined forecast charts.

The joined forecast feature gives you the possibility to automatically merge subsequent forecasts of the same product into a single chart, which makes the briefing for long-haul flights much more useful and practical.

So, instead of several charts with different validity time, the pilot only receives a single sheet where several charts are joined, clearly indicating the areas and times of validity.

FLIGHT BRIEFING
fast and easy document production

INSTANT BRIEFING

The Aero Weather's Instant Briefing feature allows you to immediately generate a Pre-Flight Information (PIB) for any flight. You simply select a destination airport and choose the IFR/VFR flight rules and a standard PIB with the relevant OPMET data will be generated for you automatically. You can also select one of the predefined map collections to be amended to the OPMET data together with the charts of your choice, including cross-sections.

Flight database

Create your own flight database by predefining scheduled flights and specifying the required content for the desired pre-flight information bulletins for each flight. Consequently, the generation of the PIB's takes only a double-click.

Flight	Departure	Time	Destination	Time
PL116	LZIB-BTS-M R STEFANIK	10:30 (UTC+0100)	OBBI-BAH-BAHRAIN INTL	18:30 (UTC+0000)
PL117	EGLL-LHR-HEATHROW	10:30 (UTC+0000)	OBBI-BAH-BAHRAIN INTL	15:30 (UTC+0000)
PL118	UUEE-SVO-SHEREMETYEVO	11:00 (UTC+0300)	LOWW-VIE-SCHWECHAT	15:00 (UTC+0100)
PL119	EDDF-FRA-FRANKFURT MAIN	11:00 (UTC+0100)	EGSS-STN-STANSTED	12:00 (UTC+0000)
PL120	LKPR-PRG-RUZYNE	11:00 (UTC+0100)	EGLL-LHR-HEATHROW	12:00 (UTC+0000)

### Pre-Flight Information Bulletin output and delivery

The Pre-Flight Information Bulletin (PIB) is the main outcome of Aero Weather. It is produced in the widely used PDF format, ideal for electronic distribution with unprecedented output quality. The PIB production features include:

- Printing of the flight documentation folder
- Scheduled automatic printing of the flight documentation folder, based on pre-defined flights on preselected printers
- Scheduled automatic e-mail, FAX or FTP delivery of the flight documentation folder, based on pre-defined flights on preselected e-mail, FAX or FTP destinations

Web Portal and Web Services

Use the Aero Weather Web-portal with access-control for the scheduled or user-requested delivery of the flight documentation folder.

REST API Web Service provided with Aero Weather Server allows genuine interoperability with external applications such as Airport central information systems.
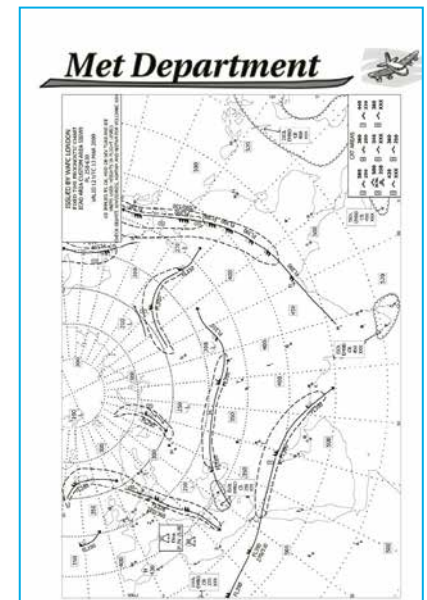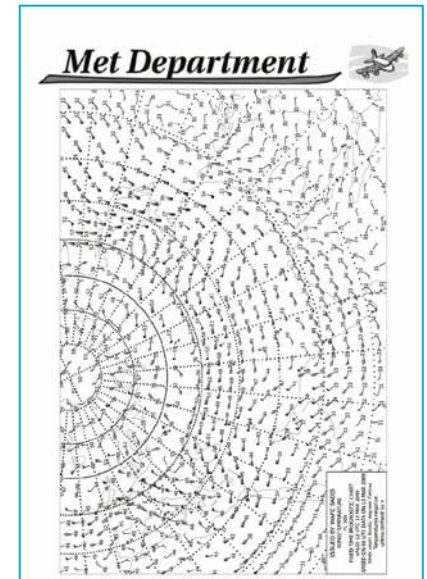
COMPATIBLE
compliance and integration

aero weather

COMPLIANCE TO STANDARDS

GET CONNECTED TO SADIS AND WIFS

Aero Weather fully complies with the following standards and recommendations:

- SADIS workstation requirements (1.1 April 2021) agreed by SADISOPSG/19
- ICAO Annex 3, including amendments up to Amendment 81
- WMO Manual on Global Telecommunication System 386
- WMO Manual on Codes 306, incl. binary codes GRIB, GRIB2 and BUFR
- WMO Manual on Global Data Processing System 485
- ICAO Doc 10003, Manual on the Digital Exchange of Aeronautical Meteorological Information

Aero Weather's flexible capabilities for data reception and transmission include:

- SADIS FTP, SADIS API
- NOAA WAFS Internet Service (WIFS)
- Satellite broadcast reception
- Message Switching Systems, GTS
- Surface observation network
- AFTN & AMHS network
- TCP/IP WMO stream protocol
- User-ingested data
- Flexible file-transfer data exchange

System Compatibility

- Runs under Windows 10/11 and Linux (Unix) systems.
- Capable to integrate other types of data, such as radar and satellite imagery, wind-profiler, AWS.

SADIS FTP SADIS API WIFS DWD SAT

GTS NETWORK

OPMET WAFS SIGWX AFTN AMHS

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PRE-FLIGHT DOCS

WEB

USERS

AIRLINES PILOTS

USERS

DESKTOP OPERATION

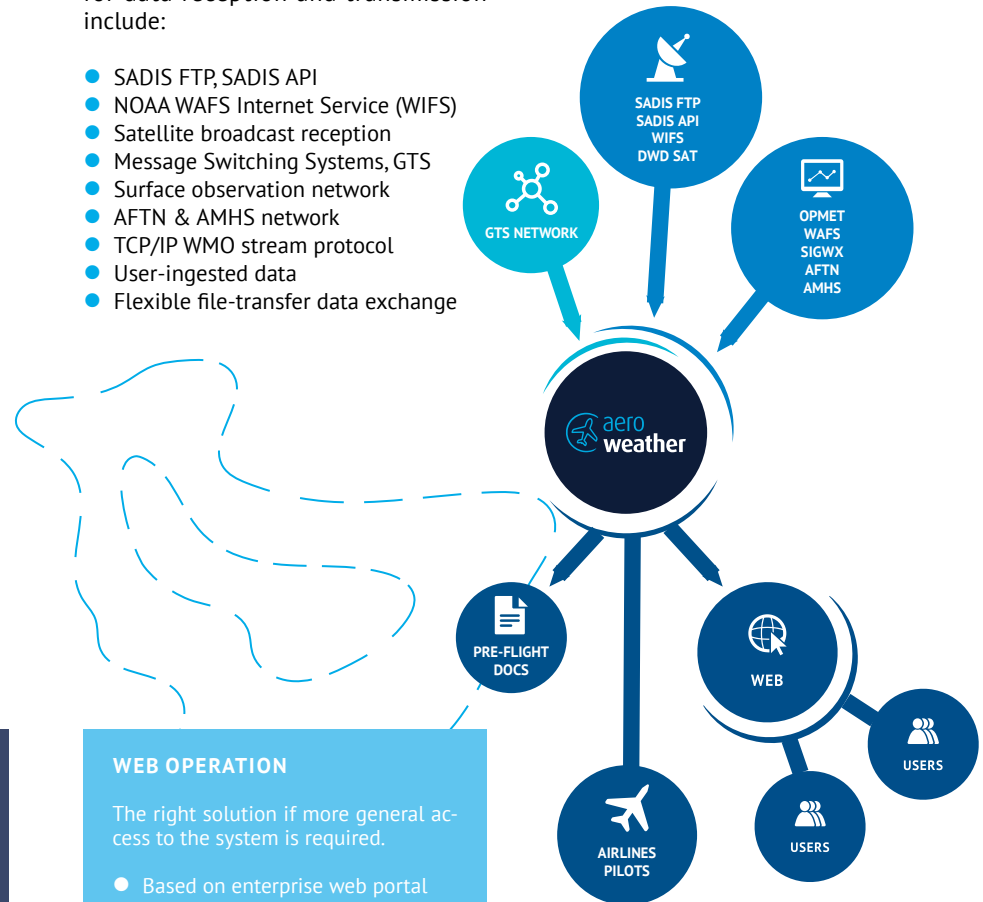Aero Weather is a modular, scalable system with various modes of operation:

- Stand-alone workstation. Running on a single PC or notebook.
- Server and client systems. Native client-server architecture for better user experience – multiple independent clients systems share a data-provisioning server.
- High-availability configuration.

WEB OPERATION

The right solution if more general access to the system is required.

- Based on enterprise web portal technology.
- Built-in content management system.
- Regular browser used as a client software.
- Accessible from desktop web browsers and mobile devices.
- User management and content.

ibl weather software solutions

IBL Software Engineering builds its reputation on 45 years of tradition in the field of Meteorological IT development. Dating from its first Automated Meteorological Message Switching Systems, the branch in Frankfurt, Germany, was established in 1988, while the branch in Bratislava, Slovakia was opened in 1997. IBL Software Engineering is employing IT specialists working exclusively in the Meteorological IT Environment with a high level of professional expertise.

IBL Software Engineering is ISO 9001:2015, ISO 27001:2013, and ISO 14001:2015 certified in the scope of development, supplying, installation, and maintenance of software for meteorological information systems. As a representative of Hydro-Meteorological Equipment Industry it is recognized by WMO and IBL's experts are participating in the number of WMO Expert Teams. IBL pays close attention to the advancements in BUFR, IWXXM, Amendment 81, GRIB3, etc. and its products fully comply to the following standards:

- WMO Manuals on Codes 306, on Global Telecommunication System 386, on Global Data Processing System 485
- ICAO Annex 3 up to Amendment 81 and ICAO Regional SIGMET Guides as of 2023
- SADIS workstation requirements 1.1 April 2021

Contact us:
T: +421 (0) 2 3266 2111

sales@iblsoft.com
www.iblsoft.com

Galvaniho 17/c
821 04 Bratislava
Slovakia

PRODUCT PORTFOLIO

If the integration of all meteorological data processing systems is the key factor for the effective operation of your business, then with the IBL product portfolio your integration efforts are minimized, because IBL systems are designed to closely cooperate to provide the desired synergy.

No meteorological office is an island, entire of itself.

visual **weather**

numeric **weather**

open **weather**

satellite **weather**

climate **weather**

online **weather**

recode **weather**

swim **weather**

moving **weather**