Datasheet: smartWeather
Weather information management system

Timely, accurate and readily-available weather information is essential for Air Traffic Management decision-making and to ensure a safe airspace during changing meteorological situations. Air Navigation Service Providers (ANSP) need tools at their disposal to effectively manage meteorological data and meet this challenge successfully.

ANSPs also need to manage IWXXM formatted data, as mandated by ICAO, which represents the start of a major change from the provision and exchange of textual MET data towards a digital environment supporting System Wide Information Management (SWIM).

smartWeather provides the flexibility and reliability to acquire all types of MET data from multiple sources and the processing functionality to validate, store and redistribute the data, along with the ability to produce weather charts.

Key features

- Acquire weather data from all infrastructures in use within the aviation market to distribute data including SWIM, AMHS, AFTN, WMO, SADIS and the Internet

- Manage all types of weather data formats – textual, binary, IWXXM and graphical

- Support validation and storage of IWXXM formatted data and the bi-directional conversion between TAC and IWXXM

- Support automatic re-distribution of MET data to subscribers in both TAC and IWXXM formats

- Produce all types of weather charts such as SIGWX, W&T and Cross Section

- Seamlessly integrate with smartAIM and CADAS to support production of pre-flight information briefing with combined NOTAM and MET information

smartWeather at a glance

- Designed with the latest computing technologies offering high level of availability, modularity and the lowest lifecycle costs compared to other market alternatives

- Complies with all relevant ICAO and WMO standards including latest amendment of ICAO Annex 3

- Complies with EUROCAE ED-153 Guidelines for Software Assurance

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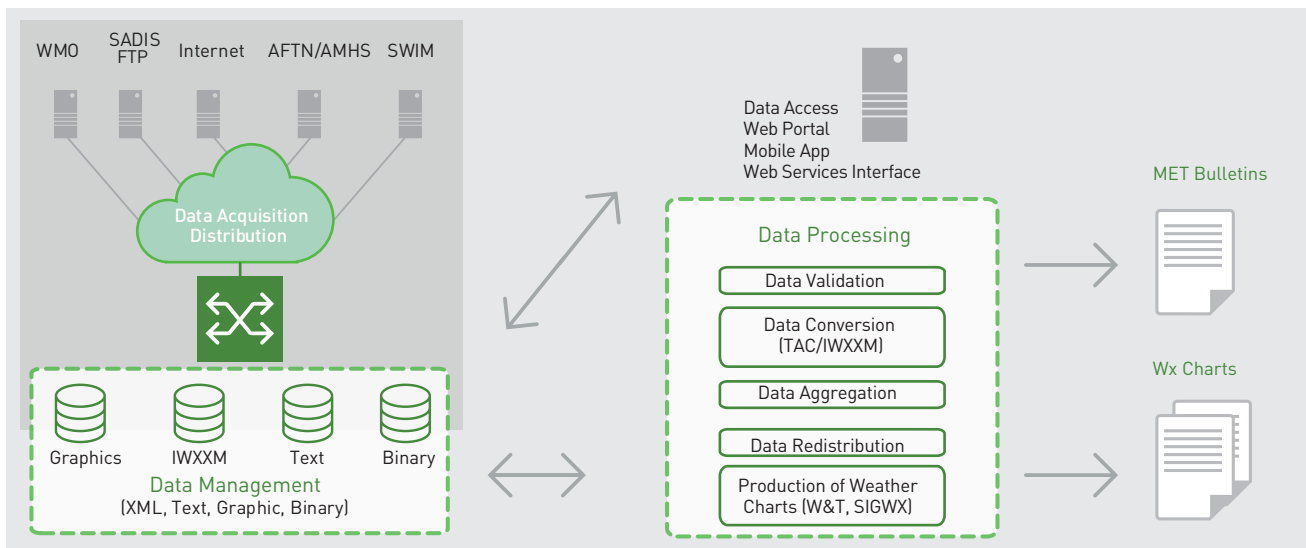
Benefits

smartWeather is designed using a Service-Oriented Architecture (SOA) resulting in a system that is highly modular and flexible allowing ANSPs to easily accommodate new data types, new functional requirements, additional users and/or an increase in transactions.

A wide range of options for accessing the data stored in the database are offered, including applications available from Frequentis (i.e. - web portals and applications for mobile devices) and SWIM-compliant web service interfaces allowing customers to use their own applications.

Applications supporting data models from other domains such as Aeronautical Information Exchange Model (AIXM) and Flight Information Exchange Model (FIXM) can be easily integrated. Additionally, widely used data modelling techniques can be used to provide new possibilities for ANSPs to produce and offer new products and services to their customers.

Technical specifications

Data Sources	SWIM, AMHS, AFTN, SADIS, WMO and the Internet
Data Formats	TAC, IWXXM, Binary, Graphics
Data Queries	OGC standards WFS, WCS, WMS and SWIM compliant web services interfaces
Availability	99.999%