



ubitech Spatia

Spatial AIS Package

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+ SPATIAL AIS INTEGRATION

We designed **Ubitech Spatia** with two fundamental principles:

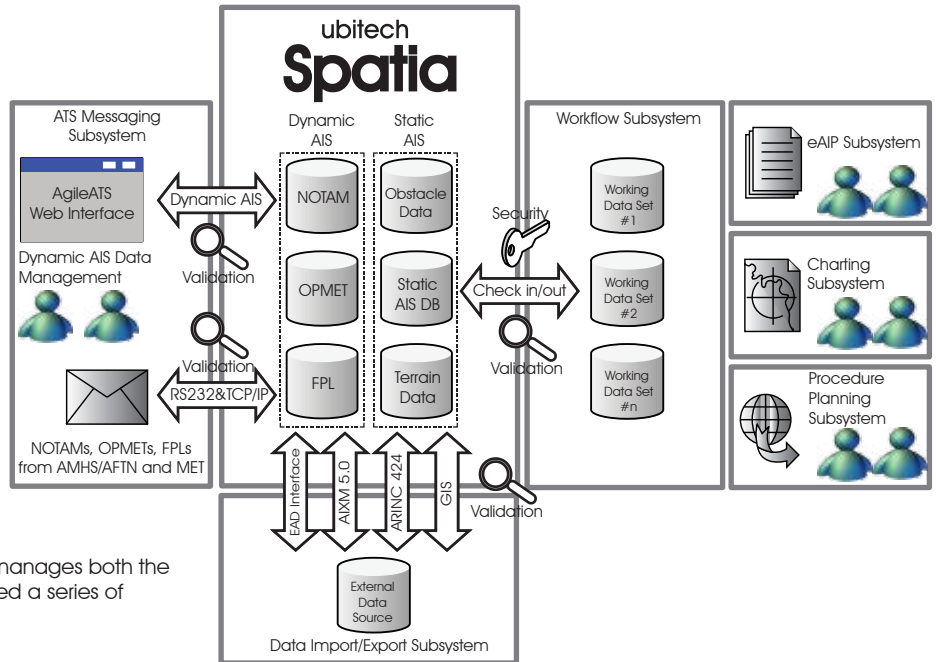
- Ideally all types of AIS data should be integrated into a single AIS package
- AIS data is inherently Spatial data and should be managed within a GIS system

The result is **Ubitech Spatia**, a powerful yet scalable GIS System that manages both Dynamic and Static AIS data.

- Available in Standard & Enterprise versions
- Uses ESRI's GIS platform
- Makes use of 100% COTS hardware
- Fully-Redundant architecture
- Requires minimal DB administration resources

The system architecture is a central database that manages both the Dynamic and Static AIS data. Ubitech has developed a series of subsystems that provide advanced use of this data:

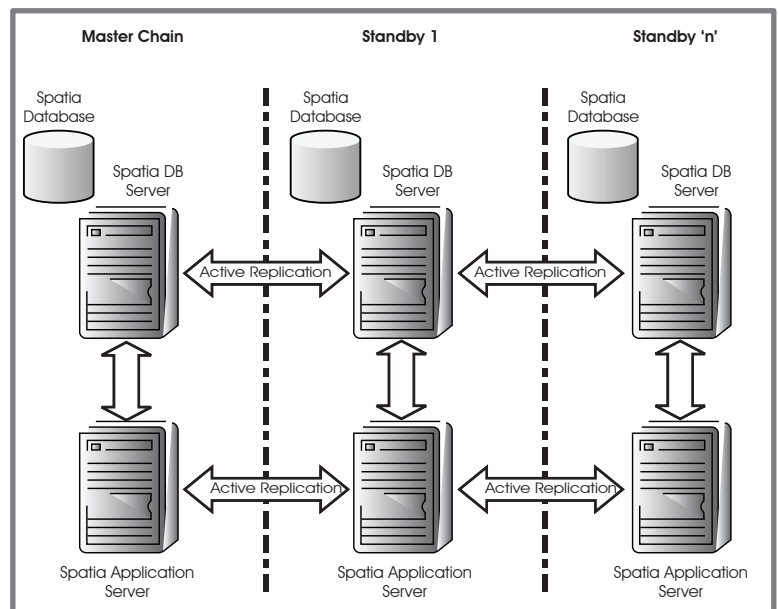
- Aeronautical Charting Subsystem
- eAIP Subsystem
- ATS Messaging Subsystem
- Data Import/Export Subsystem
- Procedure Planning Subsystem
- MET Subsystem
- Workflow Subsystem



+ MISSION-CRITICAL ARCHITECTURE

The robust architecture of **Ubitech Spatia** ensures business continuity in the face of failures or disaster. Within the system there is *No Single Point of Failure* as all hardware and software components are replicated. Ubitech employs *Multiple Chain Architecture* which consists of a Master & Standby server configuration that house identical, but independent databases. In the unlikely case of a failure in the Master, the Standby assumes operations seamlessly without human intervention and without the loss of any data.

Ubitech offers the unique capability of *'n Replication'* a technique by which an infinite number of Standby servers can be deployed off the Master. These Standby servers can be colocated within the same facility as the Master or distributed geographically across large distances.



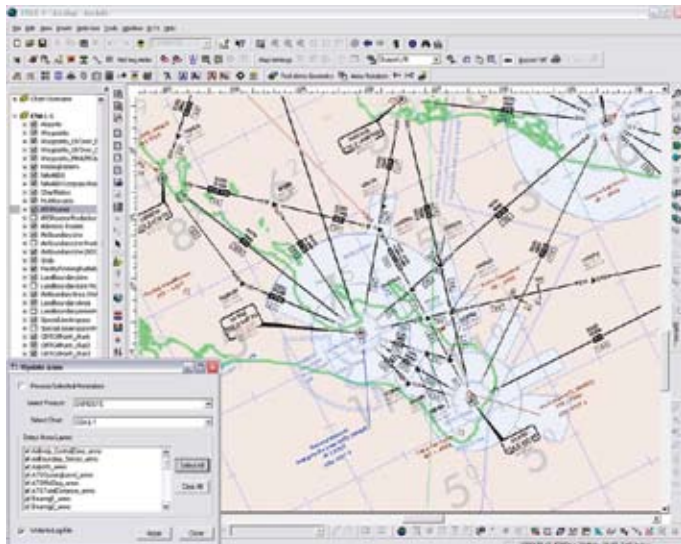
+ AERONAUTICAL CHARTING

Spatia's aeronautical charting subsystem, built on ESR1's PLTS solution, automatically produces ICAO compliant charts driven by the static AIS database.

- Aerodrome Obstacle (Type A,B,C)
- Enroute
- Standard Departure (SID)
- Instrument Approach
- Aerodrome/Heliport
- Aircraft Parking/Docking
- Precision Approach Terrain
- Area
- Standard Arrival (STAR)
- Visual Approach
- Ground Movement

While these charts can be produced with very little user intervention, the user maintains the ability to make modifications as desired.

A unique feature of Ubitech Spatia is that the Aeronautical Charting Application can be used to visually manage static AIS data. Data elements that are modified within the charting application can be committed back to the central database. Visually working with AIS data is much easier than the textual methods currently employed around the world.

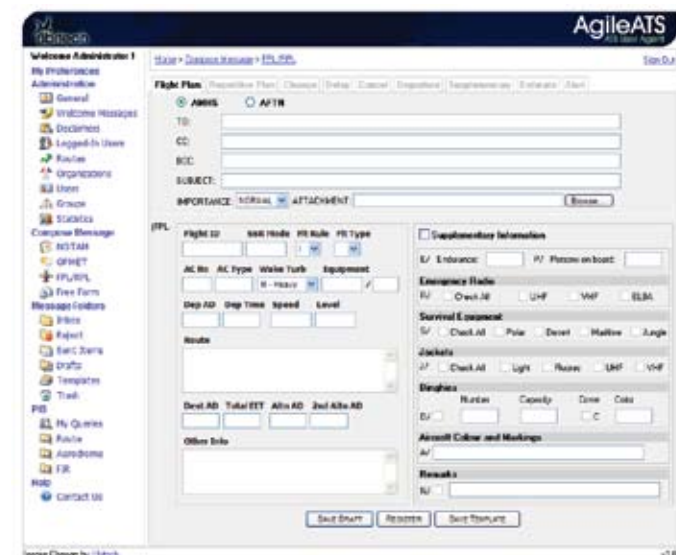


Example of an aeronautical chart in production

+ ATS MESSAGING

The ATS Messaging Subsystem integrates both Ubitech's InfoStore AIS database technology and our AgileATS web-based User Agent to provide Spatia with dynamic AIS data capabilities.

- Reception and distribution of NOTAM, OPMET, and FPL messages
- Management of the dynamic AIS data lifecycle
- Production of Pre-Flight Information Bulletins including Narrow Route
- Integrates Dynamic data with Static data to allow the visualization of NOTAMs, OPMETs, and FPLs in real time.
- Allows for syntactic and complex semantic validation of all NOTAMs, OPMETs, and FPLs based on Static data



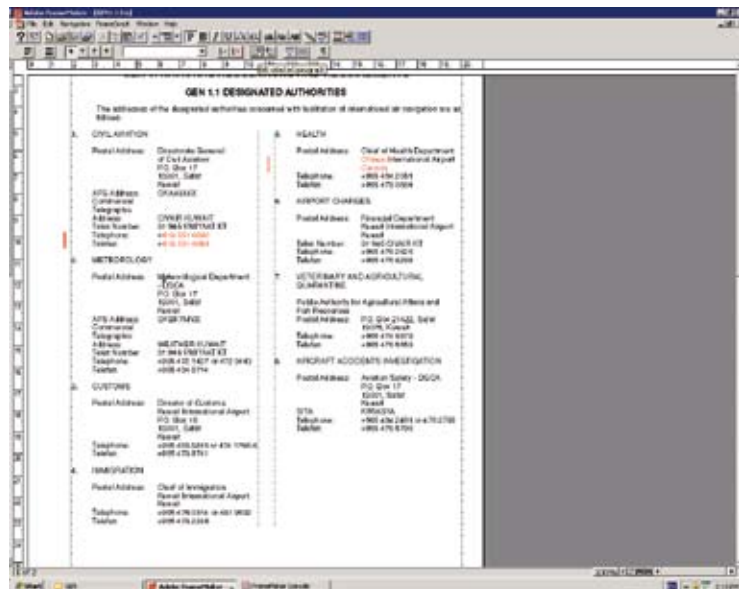
+ SKYSOURCE eAIP

Spatia's eAIP Subsystem comes from the close integration of Ubitech's SkySource eAIP system with the Spatia AIS package. It systematically manages the AIP workflow within a collaborative work environment to ensure the AIP is published according to the AIRAC cycle.

For the processing of AIP documents, Ubitech has combined Adobe FrameMaker with the Miramo database publishing engine to produce an effective tool for working with data-centric documents.

- Robust document templates
- ICAO compliant structure and format
- Separation of fixed textual elements from dynamic data elements
- Integration with static AIS databases
- Simplified management of data-centric sections like the Enroute Tables
- Automatic insertion of change bars
- Close integration with the Aeronautical Charting Subsystem for the inclusion of charts within the AIP

Example of an AIP document being edited



Example of a Flight Plan message template in AgileATS

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