AVIATION MONITORING SOLUTIONS AND DATA ANALYTICS

Streamline and optimize your business operations through Big Data

ALTYS TECHNOLOGIES

USERS

- Air navigation service providers
- CNS service providers
- Manufacturers
- Civil aviation authorities
- Regulatory agencies
- MRO organizations

Timely access to information is essential in order to ensure safe, efficient, and profitable air transport operations. Data generated by the numerous involved stakeholders and systems is constantly growing in volume, diversity, and complexity. Supporting that data proves challenging, as it requires robust, versatile and highly sophisticated processing capabilities.

BENEFITS

- Increase situational awareness
- Improve operational efficiency
- Verify, optimize and reduce costs
- Control operational performance
- Check system performance and compliance to standards
- Anticipate disrupting events
- Automate tracking of anomalies
- Improve collaborative decision-making processes

CNS MONITORING

COMMUNICATIONS

- VHF datalink (Mode A or Mode 2), satellite communications, cellular communications
- ACARS, ATN, IP networks
- ATC applications: DCL, D-ATIS, D-TAXI, CPDLC, ADS-C, 4D Trajectory
- AOC applications: ARINC 620, FMS AOC applications, etc.
- AOC reports: engine, fuel, maintenance, weather, flight plan, position

NAVIGATION

- GNSS signals
- GBAS
- SBAS
- ILS
- DME
- VOR

SURVEILLANCE

- Mode S
- ADS-B
- TCAS

SERVICES

For the last 15 years, ALTYS Technologies has been supplying a wide range of monitoring and analysis solutions dedicated to professionals of the aviation industry in support of a large number of technologies and applications.

- **CNS monitoring**
  Real-time monitoring of CNS infrastructures and service performance, detection and investigation of technical issues and service disruptions, characterization of CNS system capacity trends to anticipate need for future deployments.

- **Flight tracking**
  Real-time flight tracking services based on ALTYS's widely-deployed network of VHF and ADS-B sensors and third-party data, enhancing situational awareness and facilitating operational optimizations for airlines, airports and ATC.

- **Operational performance monitoring**
  Useful metrics for airlines, airports and ANSPs to measure turnover rates, holding time, taxiing delays as well as associated fees.

- **Fee management**
  Independent recording of all aircraft movements to verify airport fees and facilitate the automation of invoicing processes.

- **Surface management**
  Surface management services through real-time tracking of aircraft movements and advanced analytics enabling identification of tarmac delays and bottlenecks; optimized management of airport surface.

- **Aircraft health monitoring**
  Remote and automated detection of avionic equipment malfunctions while aircraft is in flight to optimize maintenance operations, reduce grounding time, and alert ATC of reduced-performance aircraft.

SOLUTIONS

COSMOS

COSMOS is a flexible and adaptive Big Data architecture solution developed and operated by ALTYS. It supports aggregation of multi-source data. Information can be collected from our customers' operational environment – as well as that of third parties such as ATM, airports, or airlines – or from ALTYS Technologies' network of cloud-connected sensors.
Typed data collection, flexible data structures, dynamic information extraction/storage and multi-step processing enable the implementation of high performance web-based applications supporting both real-time and non real-time operations.

SCAN

SCAN is COSMOS's manual data import tool supporting data file upload. SCAN merges manually uploaded data with live flows during post-processing activities.

MAP

MAP is the COSMOS platform's specialized cartography monitoring plug-in application, used in support of flight, airport movement, and geo-localized event tracking services. It can use multiple map libraries and aircraft position information sources.

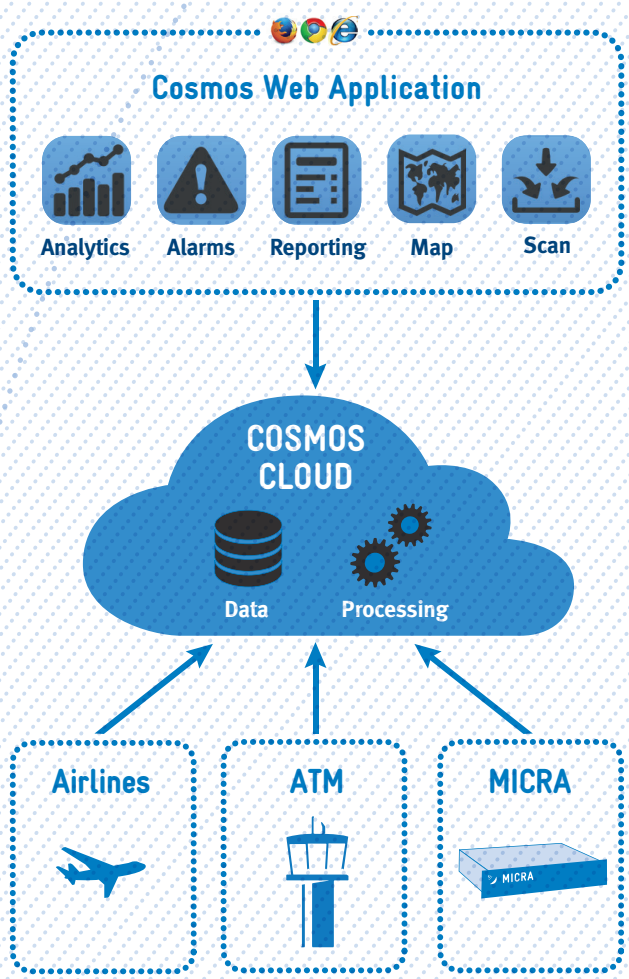
APA

APA is a user-friendly, all-in-one traffic analyzer able to decode main standardized communication protocols used in CNS systems: ACARS, VDL Mode 2, ATN, ASTERIX (Surveillance format), GBAS data, avionic protocols. The software can run off-line, from a computer-locked license or a license server.

MICRA

MICRA is ALTYS Technologies' cutting-edge CNS sensor: a unique multi-mode, multi-channel digital radio receiver based on Software Defined Radio technology.
MICRA supports ACARS and VDL Mode 2 processing simultaneously over up to 4 frequencies, ADS-B (1090 ES or UAT), integrates RF spectrum analysis capabilities and is synchronized with GPS. It offers an Ethernet interface and is plug-and-play with ALTYS's COSMOS solution.
With its reduced volume, weight and higher performances than any other ATC radio equipment, MICRA is the most advanced aeronautical digital radio receiver available in the industry.

COSMOS ARCHITECTURE



COSMOS TOOLS

The COSMOS platform offers a wide range of functions, powerful analytics, easy-to-use monitoring and decision-making support tools:

- CUSTOMIZABLE KPIs AND VISUALIZATION HMI
- CONFIGURABLE EVENT DETECTION
- E-MAIL / SMS ALERT
- GENERIC STATISTICS QUERY ENGINE
- AUTOMATICALLY GENERATED REPORTS
- DATA NAVIGATION & ANALYSIS
- GEO-LOCALIZED EVENT TRACKING
- MANUAL DATA IMPORT

CURRENT USERS

- AIRBUS
- Austro Control
- BARFIELD
- Dassault Aviation
- DSNA
- ENAIRE
- Embraer
- EUROCONTROL
- FAA
- Harris Corporation
- Honeywell
- MITRE Corporation
- NATS
- NASA
- NAV Portugal
- Rockwell Collins IMS (ARINC)
- SELEX
- SITA
- Skyguide
- THALES Air Systems
- THALES Avionics

info@altys-tech.net
ww.altys-tech.net

7, avenue Parmentier
31200 Toulouse
FRANCE
Tel: +33 (0)9 88 77 74 00

4101 NW 29th St
Miami, FL, 33142
USA
Tel: +1 305 690 2439

ALTYS TECHNOLOGIES