Coulson Aviation's Innovative Approach to Automated Data Management with SKYTRAC Leads the Way in Aerial Firefighting

iridium connected

Coulson Aviation is a global leader in aerial support operations. Throughout the company's 60+ years as an organization, the mission has remained the same: to protect the world from forest fires.

Background

With over 225,000 flight hours and the largest fleet of rotary and fixed-wing emergency response aircraft, Coulson supports operations in North America, South America, Australia, and Asia via a diverse fleet of day and night aerial assets. Coulson Aviation is a family-owned company and has been in business for over 60 years. As a leading supplier to country, state, and federal governments worldwide, Coulson has focused its next-generation multi-mission fleet on sustainable, in-production aircraft such as the Boeing 737, the Lockheed C-130, and Boeing CH-47. Working in partnership with the OEMs and leveraging the latest technology allows Coulson to provide superior all-hazard response aircraft.

Valuing safety, professionalism, and innovation, Coulson Aviation provides meticulously serviced aircraft to efficiently attack fires 24/7. Coulson's expansive fleet currently includes the Boeing 737 FireLiner™ tankers, C-130 Hercules, Chinook CH-47 helitankers, Sikorsky S-61 and S-76 helicopters, Black Hawk UH-60 helitankers, Bell 412 helicopters, Bombardier Challenger jets, Cessna Citation jets, and Martin Mars water bombers.

Read more →

SKYTRAC is a member of the ACR Group of Companies.

COULSON AVIATION

Organization: Coulson Aviation Inc.
Location: British Columbia, Canada
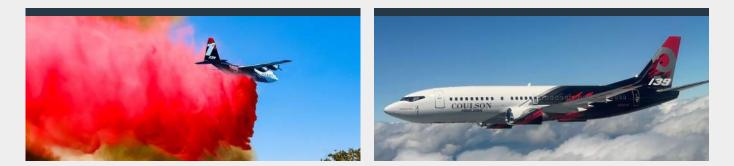**Industry:** Aerial Firefighting

»

"As the largest operator of Type 1 Rotary and Fixed-Wing Emergency Response Aircraft worldwide, we require the same commitment to excellence that we provide to our customers. Our longstanding relationship with SKYTRAC for automated data management and global voice and text communication has allowed us to provide our customers with reliable and robust real-time data."

Britton Coulson, Coulson Aviation

Opportunity

To sustain their rapid growth, Coulson Aviation required streamlining and data integration to effectively manage their global fleet in multiple countries. With various government agencies selecting Coulson Aviation services to battle wildfires across the globe, Coulson Aviation required a solution that could integrate with multiple agencies as well as their own internal systems.

To simplify their operations, Coulson Aviation required a solution with automated postflight Operational Loads Monitoring (OLM) data offloading through cost-effective cellular connectivity capable of sending data to Coulson Aviation headquarters as well as to their government partners.

OLM is a structural usage substantiation activity involving capture, analysis, and reporting of measured stress data and other flight parameters of an aircraft in service. This capability reports the stress on aircraft from repeated missions and varied environmental conditions. Removal of the data, however, required manual efforts each time Coulson Aviation needed to analyze their flight data. To enable automated data management to reduce unnecessary labor costs, Coulson Aviation equipped their Boeing 737s and Lockheed C-130s with SKYTRAC's solution to capture and offload OLM data wirelessly.

To further support Coulson Aviation's multinational operations, they also required reliable, global voice and messaging capabilities. Coulson Aviation selected SKYTRAC's Cockpit Display Panel (CDP) and Dispatch Voice Interface (DVI) to enable global connectivity between air and ground crews.

SKYTRAC in Action

Coulson Aviation utilizes SKYTRAC's proven and multifunctional ISAT-200A Satcom system for data acquisition capabilities, capturing numerous parameters as required for their data management efforts. SKYTRAC provided Coulson Aviation with custom configuration for the ISAT-200A to capture United States Forest Services Table 2 parameters such as GPS data, VDOP, HDOP, pitch, pitch rate, and other OLM data.

The captured data is wirelessly offloaded by SKYTRAC's Dynamic Air Link 200 (DAL-200), an optional accessory which gives the ISAT-200A Wi-Fi and cellular capabilities. Once in the range of cellular connectivity, the DAL-200 enables the ISAT-200A to wirelessly offload and forward the OLM data in the form of .CSV flight logs directly to Coulson Aviation's servers. To seamlessly implement SKYTRAC's end-to-end solution for automated data management, SKYTRAC assigned a Technical Program Manager to assist Coulson Aviation in upgrading their operations.

Typically, offloading and forwarding Operational Loads Monitoring (OLM) data is a manual, cumbersome, and time-consuming process for maintenance teams. With wireless offloading and forwarding of OLM data capability, not only is this process simplified for maintenance teams, but Coulson Aviation can also direct bill to increase speed of payment and accuracy of billing. By recording OLM data, Coulson Aviation's maintenance team will have accurate and detailed USFS Table 2 data to gauge aircraft stress such as G forces in mission-critical aerial firefighting conditions. Enabling automated offloading of OLM data will also notify maintenance teams of any issues in real-

time allowing for corrective action and monitoring of action taken.

Coulson Aviation also utilizes with SKYTRAC's highly reliable and programmable CDP/DVI to connect their air and ground crew via satellite voice and text. By utilizing the Iridium Certus satellite network, SKYTRAC provides Coulson Aviation with crystal clear, low latency, and weather resilient voice and text communications for their global operations. The Iridium-enabled voice and text communications offer Coulson Aviation reliable connectivity immune to environmental conditions such as smoke – a critical capability for aerial firefighting.

Conclusion

Coulson Aviation is now able to automate postflight data offloading, access rich data and analytics globally in one dashboard, automatically forward data to government partners, and reduce the burden on maintenance staff. To learn more. please contact **sales@skytrac.ca** or visit **www.skytrac.ca.**

»

"With over 20 years of expertise in aerial firefighting, we are proud to support a global leader such as Coulson streamline their operations with our automated data management solution. Adopting an innovative approach to better protect the world from forest fires, Coulson continues to set the tone for aerial firefighting operations across the world."

Jan van der Heul, VP Sales at SKYTRAC

SKYTRAC is a member of the ACR Group of Companies.

skytrac.ca
sales@skytrac.ca

SKYTRAC

ISAT-200A SATCOM

The ISAT-200A is SKYTRAC's lightweight data acquisition unit with added transceiver and on-board server capabilities. This proven and multi-functional system is central to facilitating real-time fleet awareness, accurate FDM performance analysis, and Electronic Flight Bag (EFB) document automation. Track fleet activity across the globe, automatically detect in-flight events, and capture robust data to feed your FOQA, MOQA, SMS and other operations systems.

CDP/DVI

SKYTRAC's Cockpit Display Panel and Dispatch Voice Interface (CDP/DVI) is a reliable solution for connecting air and ground crew via satellite voice and text. The system includes up to 125 programmable speed dial numbers international dialing, up to 99 pre-programmed quick mail messages with editable fields (such as ETA, PAX or destination), automatic and manual brightness control, and audible alerts for incoming messages. The hardware comes in an NVIS version, ideal for use in night-time operations.

PRODUCT HIGHLIGHTS

- Enable multiple capabilities with an all-in-one Satcom solution
- Gain unprecedented onboard data logging and real-time analysis
- Guarantee global satellite coverage with a small form factor GPS/Iridium Antenna
- Capture internal and external audio visual with rugged, discreet camera kits
- Gain cost-effective Satcom connectivity with Iridium narrowband bandwidth

INDUSTRY SEGMENTS

The #1 Option for Global L-Band SATCOM

SKYTRAC serves the largest organizations in multiple industry verticals. With 7,500+ global customers on all seven continents, we ensure our products and services are highly reliable and are trusted by those that depend on us for mission-critical applications. Our solutions are designed for both fixed-wing, rotarycraft, and unmanned aviation.

We serve the following industries:

- Aerial Firefighting
- Air Transport
- Business Aviation
- Emergency Medical Services

- Law Enforcement
- Military and Government
- Tourism
- UAV

For more information, contact a connectivity expert at **sales@skytrac.ca**

SKYTRAC is a member of the ACR Group of Companies.

skytrac.ca
sales@skytrac.ca

SKYTRAC