



An EUMETSAT + LEADS® Weather Decision Support System for the Iraqi Air Force



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Introduction

Overview

IPS MeteoStar, Inc. (IPSM) recently implemented a military meteorology decision support system for the Iraqi Air Force Weather Agency (IAFWA) as part of an agency-wide modernization program overseen by the US Army and US Air Force. Headquartered in Baghdad, the IAFWA consists of over 20 forecasters, trained by the US Air Force, who provide tailored weather analysis and forecast services for military operations spanning 6 air bases in Iraq. They also support the Iraqi Army and Navy with military-focused weather products. To facilitate safety of flight within the IAF, accurate, timely weather forecasts must be created and disseminated. Production of these precise weather forecasts by the IAFWA requires access to the most detailed and up-to-date meteorological data available. Iraq and much of the Middle East is known to be a data-sparse area with respect to weather information. Additionally, internet services inside Iraq are spotty at best. As a result, IAFWA forecasters have limited access to detailed data to make accurate forecasts.

In the past, the IAFWA have relied heavily on the US Air Force for in-situ weather data, systems, support and training. However, a clear need was present for a more robust, uninterrupted, up-to-date weather data reception system that did not rely on internet communications. To this end, IPSM won a competitive bid to deliver an integrated European Union Meteorological Satellite (EUMETSAT) + Leading Environmental Analysis and Display System (LEADS®) solution to the IAFWA. This systems primary purpose was to provide the IAFWA with a state-of-the-art, easy to use weather data reception and display system. The delivered EUMETSAT + LEADS® system includes advanced product visualization, web services, data interrogation, and seamless product distribution tools. The overall system, a first for Iraq, allowed the IAFWA to not only reduce their reliance on US forces for weather data, systems, and support, but also provided for a means to seamlessly support military operations in times of frequent internet outages.



IAFWA and US Air Force forecasters inspect weather data on the new LEADS® Workstations



EUMETSAT reception dish installed and operational

Challenges

Although the scope of this project was rather small, numerous challenges presented themselves at all different stages of the project. All of these challenges were overcome, ensuring a successful delivery in January 2011.

Equipment Logistics: Once all of the system hardware components were acquired and tested at IPSM (in Denver, CO), numerous issues were encountered in physically shipping the equipment to Iraq. Close coordination with FedEx, US Air Force and Army logistics, and Iraqi customs officials helped resolve these issues, ensuring all system components were delivered within 1 month of shipping from IPSM.

Personnel Logistics: Probably the biggest challenge encountered during the project was actually getting IPSM civilian technicians into Iraq for the required system installation, configuration, and training. This process included submitting numerous forms via the US Army contracting division, complex commercial airfare arrangements, and submission for/approval of Iraqi Visas. The Visa process alone took over 2 months to complete. IPSM personnel also encountered problems at the Baghdad International Airport Immigrations Office due to inconsistent and unpublished entry policies and procedures. Careful negotiations helped resolve these issues and IPSM technicians were able to enter the country and complete their tasks on time.

In-Country Situation: IPSM knew from the onset of this project that the overall situation in-country would be a significant challenge. Not only did the civil works required for the installation of the reception dish mounting equipment take over 2 months to coordinate and complete, but the working and lodging conditions were quite rugged. IPSM mitigated these challenges by not only contacting several US military engineering agencies in Iraq to complete the civil works, but also by sending technicians accustomed and trained to work in such a rugged, tactical environment.



An IPSM technician sets up a LEADS® Workstation in the rugged IAFWA server room



IPSM and US Air Force personnel inspect the completed EUMETSAT civil works prior to mounting the dish

Project Completion

Installation/Training

The two-week project installation and training trip to Iraq took place in early January 2011. During the first week, IPSM technicians assembled the reception dish, mounted and pointed it, ran all data lines to the servers, configured all computers, and verified data reception. The second week focused on training IAFWA personnel on how to use and maintain their new system. This included training on the creation and distribution of military-focused weather products to support operations in Iraq.

Site Acceptance Testing

The Site Acceptance Test (SAT) for the new EUMETSAT + LEADS® system was completed on January 16, 2011. The system is now fully operational and in use by the IAFWA. Weather satellite, numerical weather prediction model, surface/upper air observation, and other related meteorological data provided by the system are fully integrated into the IAFWA weather forecasting processes. Following the successful SAT, the IAFWA began working with the EUMETSAT program office to activate even more data sets available via the EUMETSAT feed. Overall, the project was an overwhelming success, meeting all of the IAFWA's stated needs and further solidifying IPSM's expertise in the global weather decision support systems market.

Recognition

IPSM worked with numerous partners and vendors to make this project a success. A special thanks goes out to Dave Wright at Dartcom, who provided the EUMETSAT reception components, ABTECH, who provided the computers/servers, and Major's Barry Hunte and Jim Bono, who were our US Air Force in-country liaisons during all phases of the project.



An IPSM technician makes final adjustments to the EUMETSAT reception dish



An IPSM technician trains IAFWA personnel on the LEADS® Workstation capabilities/functionality