

# ONDA upgrades aeronautical message handling to the next level



Frequentis Comsoft and ONDA have been working together for many years. In 2007, ONDA selected Frequentis Comsoft to install an ATS message handling system (AMHS) in Morocco. This was the first operational system on the African continent using the AMHS technology, thereby improving the connection between North Africa and Europe and underlining Morocco's unique position as the gateway to Africa.

13 years later most of the hardware components had reached end-of-life status. In October 2020, ONDA again entrusted Frequentis Comsoft with upgrading its system for enhanced airspace communication capability and full support of the latest ICAO basic and extended AMHS service profiles.

Although the whole project took place during the Covid-19 pandemic, the transition went smoothly, ahead of schedule and with no interruption to normal operability. Due to travel restrictions the delivery and installation of the system and some on-site training were executed prior to the factory training. Since the system was already installed in Casablanca, extensive training courses took place in a virtual environment in the Frequentis headquarters in Vienna. The new system has been operational at the ACC in Casablanca since November 2021.

## Client profile

ONDA (Office National Des Aéroports) is the Air Navigation Service Provider and the manager of the airports in Morocco. It provides services within Flight/Upper Information Region of Casablanca and has strategic responsibilities including major infrastructure projects.

## Business situation

Thanks to its strategic location, Morocco is an important hub for air traffic flows between many regions all over the world. The continuous and secure flow of aeronautical messages is crucial to safe air traffic management, which is why upgrades to new standards and the implementation of new features are vital in preparing ONDA to face future demands and challenges.

## Solution

The AMHS solution for ONDA consists of one complete operational system and one contingency system at the Area Control Center (ACC) in Casablanca.

## Impact

- Enhancement of airspace communication
- Full support of the latest ICAO standards
- User-friendly retrieval and display of weather information according to ICAO IWXXM format
- Inclusion of cyber security components
- Implementation of a solution to support X.500 directory services

“Frequentis Comsoft successfully upgraded our message handling system, enabling us to further support the increasing demands on our service, both now and in the future. We would like to thank the whole team for their efforts and support, and for providing us with excellent training sessions on site and in the factory.”

Bartal Said, Information Processing Division Manager, ONDA

# Morocco strengthens its unique position as the gateway to Africa

## AIDA-NG

The solution for ONDA consists of several components. AIDA-NG (Aeronautical Integrated Data Exchange Agent – Next Generation) forms the core system. It is the market-leading message handling system for all types of aeronautical data based on the European Communication Gateway (ECG) software. Thanks to its universal connectivity, AIDA-NG can be deployed in any national environment to enable interoperability with international ATC networks. It is the only AMHS/AFTN implementation that provides fully integrated and uniform message handling facilities, including efficient queue handling and tracing for all connected networks.

## User-friendly interface

User terminal access to aeronautical data and messages is provided by CADAS-ATS, a user terminal system for accessing all services related to aeronautical data. In CADAS-ATS it is now possible to display IWXXM data in a very user-friendly and convenient way, thanks to a new feature requested by ONDA. IWXXM is an ICAO format for reporting weather information in XML/GML.

ONDA also uses Frequentis Comsoft's CADIR X.500 Directory Services, a proven solution for the ICAO ATN Directory and European Directory Service (EDS). In support of a wide range of standardised protocols, CADIR integrates perfectly with the global directory service, as well as with local applications, thus allowing for future extensions.

## Safe and efficient services

The installation at the ACC consists of a primary solution and a contingency system, which is in a different building and can be used as a disaster-recovery system. The smooth switchover from one site to another makes contingency management very swift and simple. Switching over the operational services can be performed semi-automatically within minutes as the disaster recovery system is fully integrated.



Furthermore, the solution was extended with cyber security components, while user access is restricted to the HTTPS protocol. The entire technology stack is monitored and managed using the SNMP-based Central Network Monitoring System (CNMS). The new system allows for traffic statistics, a feature adapted for ONDA which is now newly implemented for other customers as well.

## Ready for the future

The pandemic has battered sectors like tourism, but the kingdom of Morocco is showing signs of recovery, such as the expansion of the country's car manufacturing and renewables industries, and an increasing number of flights. With AIDA-NG ONDA is already prepared for all future aeronautical messaging environments and demands. In addition, it is the ideal platform for the implementation of a SWIM/AMHS gateway.

**“We are pleased to support our longterm customer ONDA in enhancing their message handling capability. The successful completion of the AMHS upgrade can be attributed to the great cooperation between teams on both sides.”**

Constantin von Reden, Managing Director at Frequentis Comsoft

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