



# SUCCESS STORY

# Leonardo Helicopters Mission Management System

#### SUMMARY

- LOCATION: Europe | Italy, Norway, Poland
- KEY SOLUTION: OPENSIGHT-sdk, OPENSIGHT-ars
- BENEFITS: Operator cognitive enhancement

OPENSIGHT solutions have been selected by Leonardo Helicopters for the operator cognitive enhancement by introducing special features such as 2D/3D Moving Map, Augmented Reality and video processing techniques.

#### BACKGROUND

Leonardo Helicopters provides fully integrated Mission Management Systems (MMS) specifically designed for the full range of Leonardo Helicopters' products, including AWFamily (AW169, AW139 and AW189), AW101. MMS ensures superior situation awareness for a wide spectrum of missions, including Airborne Law Enforcement, Disaster Relief, SAR/CSAR, anti-submarine warfare and others. The open and flexible architecture enables the gathered data to be shared among different entities, thus fully exploiting it from multiple mission equipment. To satisfy the highly challenging requirements for all those mission types, Leonardo has decided to select OPENSIGHT as rendering engine for its MMS, in order to deliver highly performing solutions to its customers.







Real-time ground projection of video

#### **PROGRAM CHALLENGES**

The MCC, through the integration of OPENSIGHT solutions, exploits the on board equipment information available in the augmented reality environment to improve the geospatial situational awareness of the payload operator. It provides an innovative approach for Intelligence Surveillance and Reconnaissance (ISR) operations, enabling real-time mission analysis and dissemination to create the Common Operational Picture (COP). Finally, the specifically designed HMI (Human Machine Interface) allows for complex operations through few intuitive and smart interactions.

- 2D/3D Moving Map
- 3D Augmented Reality engine (ARS)
- Extensive support for multiple geographical data formats, including avionic maps (Jeppesen, DVOF, DAFIF etc...)
- Mission Points Management (Map + ARS)

- Vector Maps Overlay (Map + ARS)
- AIS objects rendering with extensive management (Map + ARS)
- Real Time video processing (Map + ARS)

### SOLUTION

OPENSIGHT is a software suite specifically designed to allow the development of innovative solutions for mission planning, execution, and debriefing. OPENSIGHT allows system integrators to manage information in a synthetic environment for an improved geospatial situational awareness. OPENSIGHT enables flexible customized solutions for system integrators and end-users in civil defence, police, military, and civilian industrial asset management. Basically offered as a Software Development Kit, it can also be extended with the Augmented Reality System and the Automatic Target Recognition tool. Additional turnkey solutions, ready to be installed, have been developed to address specific operational needs in defined mission scenarios. OPENSIGHT allows both the integration of new solutions from scratch and new fundamental capabilities in an existing legacy environment in order to:

- Process data from heterogeneous sensors in real-time (Electro-optical, Infrared, Hyperspectral, Radar, LIDAR, SONAR);
- Layer information from multiple warfighting functions on 3D map displays or on Augmented Reality views;
- Share information and commands, providing all the parties involved with a real-time common view of the scenarios.

OPENSIGHT simplifies the integration of advanced processing and visualization features in our product, and helps in designing flexible and modular solutions to fulfil even the most challenging requirements. Thanks to FlySight team, that supports us during the whole product cycle, the final result is a fully integrated product in the avionic platform.

Maurizio Perrini, Electrical & Avionics Systems Leonardo Helicopters

## DISCOVER MORE ABOUT OUR SOLUTIONS AT WWW.FLYSIGHT.IT