RIFIS
Repositionable IFP Flight Inspection System

Overview

>> The IDS AirNav RIFIS console is designed to support the in-flight validation phase of PBN procedures (Routes, SID, STAR and Approaches) for rotary wing through a portable solution independent of the type of helicopter used.

PBN ease the implementation of instrumental flight procedures, e.g. routes at low altitude and precision departure/approaches based on GNSS (Point in Space - PinS) even at high angles of descent. PinS procedures can also be implemented on duly equipped stands, such as helipad particularly useful for emergency operations in hospitals and on offshore platforms. In accordance with ICAO Doc 9906 Vol. 5, prior their publication, the flight procedures must be validated in order to guarantee the safety of operations, through an assessment of the flyability, accuracy and data integrity. The RIFIS console supports the flight Validation crew.
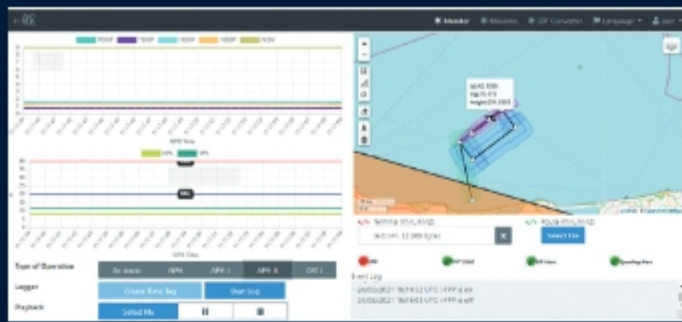
Features

RIFIS consists of the following Hardware macro-components:

>> Figure 1 – RIFIS Hardware components hosted into a ruggedized toolbox

- Ruggedized Tablet used to manage, configure and power the GNSS Receiver and to provide the user with an HMI Software;

- multi-constellation and multi-band GNSS Receiver to acquire GNSS signals and supply PVT data to the Tablet;

- GNSS antenna to be installed in the cabin; the alternative solution may be to use a helicopter GNSS antenna, if an RF cable is available in the cabin.

IDS AirNav
an enav group company

RIFIS console provides real-time information to Flight Inspection Officer to monitor the flight mission: GNSS performance, adherence of flight to the desired path, map-view of ATS Geography (airspaces, waypoints, etc...), alerting capability (e.g. navigation error threshold exceeding, RFI presence);

» Figure 2 – Flight monitoring during a PinS Approach operation

RIFIS can import Flight procedures and routes designed with IDS AirNav Suite tools (FPDAM, Airspace Designer) and allows the user to create, edit and clone Flight Validation mission;
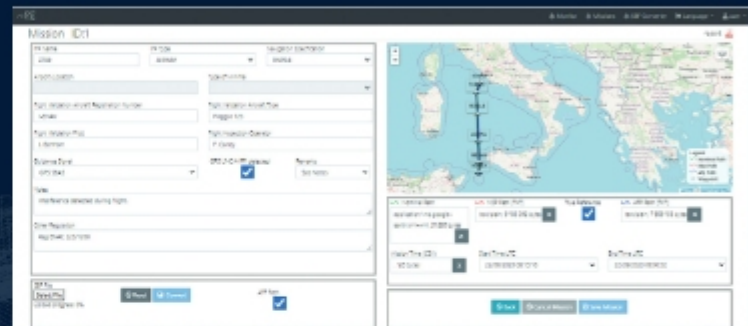
» Figure 3 – Mission definition page

Reporting capability allows the automatic generation of Flight Validation reports, in accordance with ICAO doc 8071 and ICAO doc 9906 Vol.5; PDF file are created including the following contents:
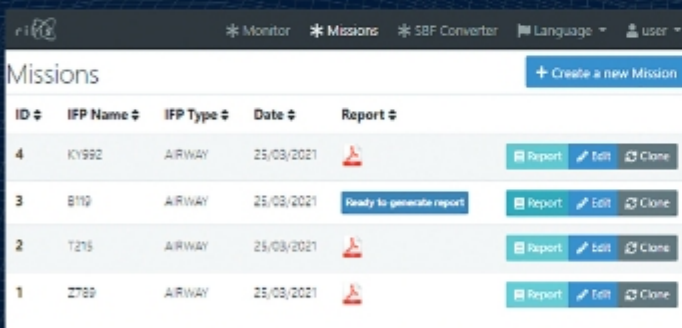
» Figure 4 – List of available missions and reports

- IFP information;
- Numeric performance analysis for each segment of the IFP validated in terms of:
- GNSS: xDOP, xPL, Satellites used
- Navigation: NSE, FTE, TSE
- Time plot vs GNSS and navigation parameters
- Statistical histograms.

Benefits

The RIFIS Console is a portable and easily transportable solution designed to minimize installation interventions on board the helicopter.
The system runs completely offline and it allows the operator to access aeronautical information, monitor the flight and execute the reporting in an all-in-one solution; moreover, it is integrated with IDS AirNav IFP design environment, providing a unique solution in the aeronautical data chain, from the survey to the final validation and publication.