

Generating Multiple Unmanned Air Vehicle Safety Certification Artifacts based on Deep Knowledge

Challenge

Accelerate the process for generating certification artifacts on a family of UAV systems operating from a universal ground control station.

Solution

An automated approach to generate certification artifacts was created based on lessons learned from past experience in commercial aerospace and military certification.

Results

The database driven application allows the client to more rapidly generate safety certification artifacts required by the FAA in order to fly in the national air space.

Prenscia Solutions worked with its client to develop an application that virtually generates certification artifacts automatically for a UAV family of systems with a common ground control station. This newly created database not only saves time, but also money since the database can be used for many different types of UAVs going through the FAA certification process.



nCode

ReliaSoft

Onnicon

The Challenge

The client operates a large fleet of UAVs of various sizes and functions, all flown from a universal ground station. Each UAV needed safety artifacts as part of its FAA certification process, a costly effort if done for each UAV separately.



The Solution

Our extensive experience with commercial and military safety and certification processes helped to define the contents of a final report.

Analyses of the UAVs were broken down into their common shared structures to create a database. A graphical application was developed to automatically generate as much of the certification report as possible, cutting down the time spent analyzing each UAV.

The Results

The client can now configure the parameters for multiple UAVs and generate artifacts using the newly created database designed for them.

This process saved the client not only time, because the artifacts are virtually completed automatically; but also money, since the database can be used for many different types of UAVs going through the certification process.



About HBM Prencscia Solutions

HBM Prencscia Solutions ensures customer success through value-driven solutions for product and process development, and operational monitoring. We are a multi-disciplinary team with expertise in failure analysis; predictive analytics and modeling for reliability, durability, and deterioration; asset health and usage monitoring; prognostics; development and testing of embedded software and electronics to deliver robust solutions to our global clients. Our team of engineers, analysts, software developers, data scientists, and program managers, many holding United States Government security clearance, are readily available to provide technical expertise and deliver value-driven solutions. For more information, please visit www.hbmprencscia.com/solutions