

DO-178B & Technology Consulting <
Software Development Services <
Independent Verification & Validation <

FOR THE AEROSPACE INDUSTRY



Foliage 

INSIGHT Aerospace software veterans who know your challenges and the best approaches to solve them

EXPERIENCE An extensive resumé of successful DO-178B Level A-D certification efforts

BOTTOM-LINE RESULTS Proven strategies that minimize software costs

What Can Foliage Do For You?

1 Align Business and Technology Goals
We work closely with your executive management and technical staff to create software technology and development strategies that are fully aligned with business objectives. Foliage leverages insights gained from more than 10 years of developing certified systems ranging from DO-178B criticality Levels A-D.

2 Shorten Time to Market Foliage offers services that lead to a faster certification process and shorter time to market. Earlier to market means increased ROI and competitive advantage.

3 Minimize Software Costs Utilizing reuse strategies and delivering superior quality software are just two of the ways that Foliage reduces your overall software costs.

4 Reduce Risks Foliage applies best-of-breed, time-tested certification strategies and decades of experience to reduce risks that can cause increased costs, schedule delays, and customer dissatisfaction.

FOLIAGE SERVICES

Packaged Services

- >> Foliage FAAStart™
- >> Foliage Reuse Advantage™

Custom Services

- >> Consulting
 - DO-178B Process
 - Technology Strategy
- >> Custom Software Development
- >> Independent Verification and Validation

Packaged Services

Foliage's packaged services provide a focused benefit with minimal investment and fast results.



A Foliage FAAStart package combines documentation templates and planning services to put you on the right path to certification — ideal for companies transitioning to higher certification levels or from military to civil certification.



A Foliage Reuse Advantage is an effective way to investigate, strategize, and plan a software reuse initiative with the insight necessary to reap its full potential — ideal for companies who need the benefits of reuse, but have an inefficient reuse strategy. Foliage can help you plan an extensible, maintainable platform to allow you to reduce your total product life-cycle costs.

SOFTWARE DEVELOPMENT & CONSULTING

Foliage Domain Experience

Airborne			Ground Based		
Data Collection <ul style="list-style-type: none"> • Flight Management • Air Data Processing • System Monitoring <ul style="list-style-type: none"> - Engine - Fuel - Gear Box 	On-Board Analysis <ul style="list-style-type: none"> • Event Alerting • Regime Monitoring • Failure Prediction • High-Speed DSP 	Airborne Displays <ul style="list-style-type: none"> • Primary Flight • Moving Map • HSI • Altimetry/RVSM • Graphics Library 	Airborne Networks & Communications <ul style="list-style-type: none"> • Web-Enabled Applications • Air to Ground Communications • Multiple Protocols 	Tracking Systems <ul style="list-style-type: none"> • Parts & Assemblies • Usage • Maintenance • Flight Profiling 	Decision Support <ul style="list-style-type: none"> • Failure Prediction • Fly/No Fly • Flight Playback • Statistical Analysis • Fleet Management
Foliage Expertise					
Certification <ul style="list-style-type: none"> • DO-178B Levels A through D • Process Consulting • TSO/STC Support • Multiple ACO Relationships 		Architecture <ul style="list-style-type: none"> • Certifiable Object Oriented Technology • Product Line Architecture • Migration Strategies 		Reuse <ul style="list-style-type: none"> • Design for Reuse • Reusable Component Library • Previously Developed Software • Airborne COTS 	

Custom Services

Consulting

DO-178B Process Consulting

Are you unfamiliar with the rigors of DO-178B, or do you wish to streamline or accelerate your current compliance processes? Foliage can work closely with you, the FAA, and their designees throughout the entire certification process. We deliver efficient and low risk DO-178B strategies tailored to your specific technical, organizational, and business needs.

No matter where you are in the development process, Foliage can assist your organization in reducing the burden of DO-178B compliance.

Technology Strategy Consulting

Foliage works closely with your executive and technical management to align your technology strategy with your corporate business goals. We apply our decades of experience to

- >> Evaluate organizational software skills and processes.
- >> Advise on current technology and trends.
- >> Recommend effective investment options.
- >> Create a roadmap for the development of new or upgraded software systems.

Software Development

From requirements to implementation, and integration to verification and certification support, Foliage has the capability to take on the full responsibility of your most challenging software development projects. We work closely with you in identifying both your software system

requirements and the underlying needs and drivers — and then ensure that the software we develop meets them. Furthermore, we have a proven track record of delivering on time and within budget.

DO-178B

For those with software systems that require certification to DO-178B, Foliage can efficiently plan, design, develop, implement, and verify your product. Foliage has years of experience with the infrastructure necessary to create Aerospace software. Using refined processes, advanced toolsets, and off-the-shelf components currently available, Foliage reduces the pain of the certified software development process. Our experience with DO-178B ranges from Level A through D, over a wide variety of platforms and applications.

Independent Verification and Validation

Our Independent Verification and Validation (IV&V) services include Test Engineering and Quality Assurance for both non-regulated and DO-178B certifiable software.

Our test engineers conduct thorough reviews of requirements, design, and code. They design, develop, and execute tests, perform requirements and structural coverage analyses, and can generate all associated documentation and artifacts required for certifiable software.

Foliage provides recognized Quality Assurance engineers to monitor projects from the initial planning through the final certification to ensure that the executed processes are the planned processes—for a smooth and uneventful certification.

Client Success Stories

1 Altimeter: DO-178B Level A

Foliage developed custom software for a next-generation, high-precision altitude measurement system. This project was driven by the FAA's mandate for the Reduced Vertical Separation Minimum (RVSM) for air traffic. Object-oriented design simplified development of a reusable platform for subsequent product offerings with similar core functionality.

2 Flight Displays: DO-178B Level B

Foliage developed the software for a new Primary Flight Display and Navigation Display for use in an integrated cockpit. The combination of an object-oriented design methodology and the reuse of common components contributed significantly to the reduction of both project costs and duration.

3 Aircraft Engine Monitor and Controller: DO-178B Level C

Foliage developed a software platform designed to monitor engine and flight data sensors, as well as control fuel flow during engine startup. This software platform was designed for reuse and supports multiple alternative configurations, including multiple engines, different sensors, and varied calibrations.

4 Health and Usage Monitoring System (HUMS): DO-178B Level C

NASA, the US Navy, and numerous other organizations and governments around the world are using HUMS software developed by Foliage. The HUMS is designed to monitor virtually all aspects of an aircraft in flight and is used on both fixed-wing and rotary aircraft. This system employs sensors to collect, store, and analyze critical flight data, and warns pilots in real time of possible in-flight problems.

5 Communications System FAAStart: DO-178B Level D

Foliage provided full consultation support throughout the planning and successful implementation of an air/ground communications system for commercial, business and general aviation aircraft.

6 Maintenance Management and Usage Analysis

To aid in the difficult task of tracking the effects of age and usage of all critical parts, an aircraft operations and leasing company contracted with Foliage to develop software for a fleet management system. This system provides parts and assembly tracking, maintenance management, usage analysis and report generation. These capabilities improve the efficiency of the maintenance organization and help extend the life of aircraft, while making them safer to fly.

Foliage has published many white papers on Aerospace topics including Software Reuse, Product Line Architectures, and OOT. Visit www.foliage.com/aerospace/info to download.



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