

Software Verification Under Pressure



A British manufacturing firm reorganized its operations, and as a result, the Director of Engineering became aware of an avionics project that was in immediate need of software verification support. The company was developing an Aircraft Management Computer (AMC) to be installed in a European military helicopter and they needed help fast. Esterline Control Systems - AVISTA came to the rescue.

The AMC is a hardware device mounted inside the cockpit. The AMC is central to a pilot's control over helicopter maneuvers. It provides critical system information and serves as the main data processor — informing the pilot of overall aircraft status. It is certified to Level B within the [DO-178B](#) standard.

Even though the software verification part of the project was far behind schedule at the time AVISTA services was engaged, a team was quickly assembled and jumped into the project. The verification team worked diligently to develop verification tests and to ensure that their software verification tasks were not a bottleneck to overall schedules. As a result, despite joining the project late, the verification was completed rapidly, allowing the overall helicopter avionics project timeline to be met.

Fast Facts

Company: Aerospace division of an international manufacturing firm

Industry: [Aerospace](#) & [Defense](#)

Geography: International

Project: Software verification for the Aircraft Management Computer (AMC) to be installed on European military helicopter

Certification: DO-178B, Level B

Challenge: Software verification activity for the Aircraft Management Computer (AMC) was far behind schedule

Solution: AVISTA services quickly assembled a dedicated team for software verification

Results: Even with coming onto the project late, and facing technical challenges, the AVISTA team successfully completed the project on schedule and within budget



Esterline Control Systems - AVISTA Success Factors

“AVISTA was chosen because of their reputation, technical expertise, and cost-effectiveness. They helped us understand how to effectively manage outsourcing of engineering services.”

Testing of the system to the exacting standards of DO-178B was a critical component. The AVISTA team brought the following strengths to the project:

- **Avionics industry experts.** The Director of Engineering had worked with AVISTA services previously at another company and knew they had extensive avionics software experience, excellent project management skills, and were cost-effective. He contacted the AVISTA team who responded quickly to this customer emergency.
- **Quick response to a crisis situation.** The [program manager](#) was on the client site within 48 hours. The team worked with the client to understand tasks, define the scope of the project, and set priorities.
- **Quick integration with client’s staff.** The staff worked closely with client’s engineering team to resolve issues as soon as they arose. The client praised the AVISTA team’s detailed project management and test reporting as an integral contribution to the project success.
- **Expert knowledge of the requirements for DO-178B certification levels.** Following the initial meetings, the team developed a statement of work and assembled a team of ten members who were dedicated to software verification for this AMC project.
- **Software verification experts.** There was so much work on the project that the aerospace division also hired a second firm to handle additional verification tasks. Schedules were tight and many project milestones were interdependent. Not only did the team help the client with their initial verification assignments, but they also took on responsibility for the other vendor’s verification project when this team failed to meet their commitments.

For more information about
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