SOFTWARE ENGINEERING SERVICES

Safety-Critical Independent Verification & Validation

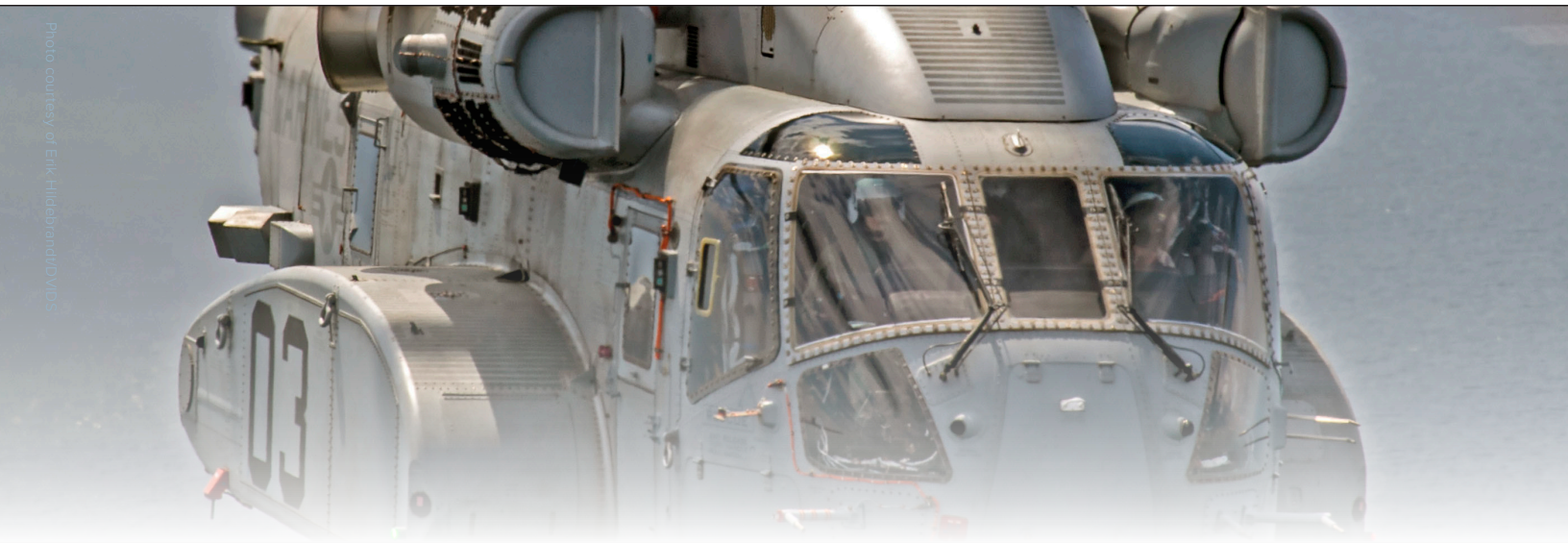


Photo courtesy of Erik Hildebrandt/DVIDS

Trusted by Regulators

In certified environments where products have the potential to cause harm, Independent Verification & Validation (IV&V) is mandated by regulators to ensure that the device does not malfunction. Failure to properly plan IV&V into your product launch strategy can cause your submission to be rejected by regulators, with costly reworks threatening to derail your product before it gets off the ground.

WE'VE MAINTAINED AN AVERAGE ESCAPE RATE OF 0.1% FOR MORE THAN A DECADE

For over 30 years, General Digital has provided IV&V services for FAA and FDA certifications—and never once had a submission rejected. Auditors praise our clear, concise test reports that easily outline 100% independent coverage to requirements. This means they can verify that all product functions are performed accurately, and that all possible inputs and outputs have been thoroughly vetted to account for any plausible scenario in the field.

When you work with General Digital, you can have confidence that your test reports will withstand regulatory scrutiny—every time.

Industry-Leading Expertise

In 1992, our team was contracted by Hamilton Standard (now Collins Aerospace) to perform unit testing for a new avionics application—making us one of the first companies to ever perform software testing in support of a DO-178 certification.

Before the FAA defined IV&V standards, General Digital recognized the need for improved traceability and process optimization to ensure that code can be tested in a way that is safe, fast, and reportable. Our engineers developed the GenIViVe™ suite of IV&V tools to automate manual steps, standardize quality, and predict testing hours for timely, accurate quotes.

In the 30 years since then, we've continued to develop our internal tools and processes to continue providing industry-leading IV&V services. When the FDA recently mandated all safety-critical medical device software must be thoroughly vetted, our team was able to apply our experience to meet this new demand, helping numerous partners get their medical devices to market—and keep them there.

From aerospace to medical devices to anything else in between, our team has the people and processes you need to ensure safety and compliance.

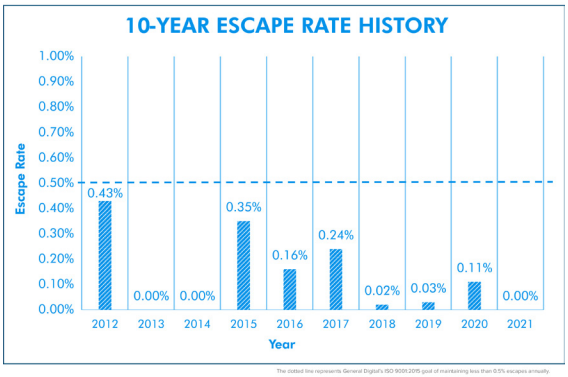
GENERAL DIGITAL™
Engineering What's Next

Quality First

Certification doesn't guarantee safety. Recalls of safety-critical software happen all too often due to poorly formatted test reports that misrepresent coverage and hide potential errors until they occur in the field. This harms consumers and opens up companies and regulators to potential litigation.

Our experienced team of on-shore engineers, combined with the power of **GenIVi**Ve, account for every possibility, ensuring 100% product reliability, above and beyond the standards of certifying bodies.

We have an ISO 9001:2015-defined quality standard to maintain an escape rate below 0.5%. We've consistently exceeded that objective by maintaining an average 0.1% escape rate for more than a decade.



Process Overview

- Requirements development and analysis
- Tool validation/qualification
- Test planning and execution
  - System testing
  - Regression testing
  - Integration testing (HSIT, SSIT)
  - Unit testing for safety-critical embedded systems
  - Code review
- Project coordination
- Discrepancy reporting and resolution
- Results reporting

A Proven Track Record

Our team of electrical, mechanical, software, and optical engineers operate under one roof in East Hartford, Connecticut. The agile environment promotes collaboration to provide unparalleled tester training and resources.

For more than 30 years, we've independently verified and validated software for aviation, defense, medical, drones, autonomous vehicles, and other safety-critical applications—and never once failed to facilitate our customer's product certification.

In addition to our extensive testing capabilities, we have two dedicated testing labs for Integration and Systems testing. We'll come to you if testing requirements dictate.

WE'LL MAKE SURE YOU GET TO MARKET—AND STAY THERE

Codes & ID Numbers

CAGE 1JA77

DUNS 06-551-9563

UEID DWMEGPGHBGY5

DDTC Registered

PSC 7010, 7021, 7025

SAM/CCR Registered

NAICS 541511, 541512, 541519

Compliance Standards

Quality Management

ISO 9001:2015 QMS Certified

Avionics Compliance

RTCA DO-178, DO-326, DO-254; **IAQG** AS9100

Medical Compliance

IEC 62304; **ISO** 13485; **CFR** 820.30; **CE/MDR**
FDA 510(k) Premarket Notifications

Industrial Compliance

IEC 61508, 61131

Transportation Compliance

IEC 62279, 61508; **ISO** 26262

GENERAL DIGITAL
Engineering What's Next

ISO 9001:2015 QUALITY MANAGEMENT SYSTEM CERTIFIED

60 Prestige Park Road

East Hartford, Connecticut 06108

Phone 860.282.2900 | **Toll-Free** 800.952.2535

E-mail gdc_info@generaldigital.com

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