

# Testing Framework for Complex Medical Software Products

## Client

Dräger Medical, A Dräger and Siemens Company, is one of the world's leading providers of innovative high-tech medical equipment offering the complete solutions for the point of care throughout the whole patient care process—from emergency care and anesthesia to critical care and perinatal care. Headquartered in Lübeck (Germany), Dräger Medical is represented in over 190 countries around the world with subsidiaries in 40 countries. Dräger Medical Systems, Inc, a division of Dräger Medical, is located in Danvers (USA).

## Project Scope

Development and implementation of a complex testing framework for sophisticated critical care products.

## Solution

In the effort to bring flawless products to market, Dräger Medical pays serious attention to software testing and verification processes. To test and provide diagnostics for various components of Dräger Medical's strategic products, Auriga delivered the following services:

- Definition of the test specifications and manual test implementation;
- Design and implementation of complex automated testing frameworks based on Rational Robot and CppUnit unit testing library;
- Development of the testing scripts;
- Design and implementation of several debugging and inspecting tools;
- Implementation of Unit tests in accordance with high-level component requirements;

- Integration of resulted products into Dräger Medical's components environment. Development and implementation of a complex testing framework for sophisticated critical care products.

## Tools and Technologies

- C++,
- CppUnit
- Rational Robot
- XML
- Windows
- Microsoft Visual Studio .NET 2003

## Customer's Quote

*"The big positive is that the competence level of the engineers is very high and it has increased since the initial relationships. We have started out with competent people that did really understand what Dräger was doing. Now we have competent people that understand Dräger, so we've been able to maintain those people. What we do see—the performance of Auriga is constantly improving."*

**Sam Cavallaro**  
Dräger Medical