

Validation of software application and medical device by QuEdge

Today medical equipments are packaged with software that is used to direct the equipment. A minor bug in the software can be a dangerous and costly affair due to the involvement of human lives. Hence, software validation becomes a critical process before releasing the medical equipment to the market. Below is a case study which outlines the partnership of a global manufacturer of medical devices with QuEdge for their software testing requirement.

The Partnership

Equipped with latest in computer hardware, communication facilities, operating systems, applications software and a team of highly motivated technically competent engineers, QuEdge is the industry's answer to software testing products and services to enable our clients to engineer quality software. QuEdge fulfills every process of testing, from providing customized solutions for testing and assuring to its maintenance as well as refining your human resource with our highly experienced training team.

Our client is a multinational company that designs, manufactures and sells medical devices. The medical devices manufactured by our client are used worldwide.

The Challenge

Our client was in the phase of launching their new product to the market. The product was a medical device packaged with a time-critical application. This entire package had to be tested to ensure its stability. Achieving this on a limited time span was the challenge plaguing our client. Increasing the size of their testing team was not a feasible option due to time, knowledge and training constraints.

The other alternative was to partner with an organization for software validation, which could:

- Perform a complete End-to-End testing of their products
- Understand the intricacies involved in medical software testing
- Ensure accuracy of the data and performance of the software with medical device
- Follow their stringent delivery deadline
- Test the software on various operating systems
- Test the medical devices on multiple operating systems
- Willing to learn and carry out testing using various custom and standard test instruments and simulators

The above requirements were huge and therefore required vast manpower with advanced expertise to carry out testing of the devices and also testing the desktop application component with permutation and combination of different operating systems and devices.

"By partnering with QuEdge we were able to launch our product into the market with greater confidence."

The Solution

QuEdge understood the intricacies of medical software testing since we have vast experience in the medical software testing domain. The quality assurance of the developed software was the crucial element. Our experienced employees learnt testing using the various instruments required for setting up the test-bed from our client within a short time.

The various testing methods and services used in this process were:

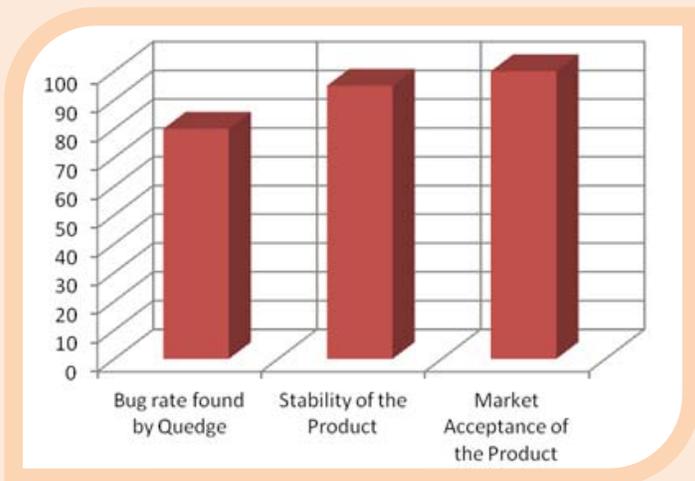
- Test Plan Creation
- Functional Testing
- Test Automation
- Regression Testing
- Performance Testing
- Compatibility Testing
- Database Testing
- Internationalization Testing
- Installation Testing
- Intra-Operability Testing
- Testing using various custom and standard test instruments and simulators

Along with the usual test methods mentioned above QuEdge also carried out:

- Exploratory testing – This testing helped to further decrease the chances of bugs in the software.
- Data Driven Architecture testing – This automation framework helped in the easy maintenance of the test scripts and simplified the complex tests.

The Result

Partnership with QuEdge as shown below resulted in a greater acceptance of the product in the global market.



1. The testing was completed within 75% of the allotted time frame for the project completion. This was achieved by:

- Using our experienced manpower
- State of the art testing methodologies

2. The bugs reported by us have helped the company in a significant manner to:

- Improve the efficiency, performance, stability of the product
- Decrease customer issues
- Launch the product to the market with greater confidence