

Complex Testing Solution (Functional/ Cross-Platform/Localization/Installation) of a PC Fax Application

“Our staff can now spend more time doing what they need to do – helping our customers instead of constant communication with the development team. The system is so dependable and scalable that it will continue to serve our business communication needs.

Work with the product is the way to go and we are delighted with the results.”

Steve Witham
Project Manager

Customer

The customer is one of the leading providers of software packages for document processing, automation, and delivery.

Company	<i>Software Provider</i>
Country	<i>London, UK; USA</i>
Business Domain	<i>Publishing Software</i>
Services Used	<i>Quality Assurance</i>
Cooperation Model	<i>Independent Software Testing and Quality Control</i>
Duration	<i>2.5 years</i>
Efforts	<i>3 man-years</i>

Project

The cross-platform product is used for automating the production and delivery of everyday business documents. It includes fax server software that is proven to be a reliable way of integrating fax with IT systems. It allows sending and receiving faxes and SMS messages from workstations and can be integrated seamlessly into business process applications for fast, automated faxing from the desktop or back office. IT administrators can further minimize faxing costs by controlling who is able to send faxes when and where in the world.

The product makes it simple for companies to control their branding and achieve compliance goals by storing standard documents such as company stationery or terms and conditions. Office documents can securely be sent as personalized PDF files.

Challenge

The capability to support a number of OS's and integrate with third-party applications (Microsoft Office, Lotus Notes, ACT, OCR, GoldMine, etc.) makes product business logic very complex. The main aim for QA was to help stabilize the product and achieve seamless stable work under different conditions.

Solution

During the testing period, various tests were performed:

- Functional tests
- Cross-platform tests

For cross-platform testing, an archive of virtual machines was created that included various operating systems and installed software specifically configured for tests.

Taking into account that a fax server supports a number of OS's, cross-platform tests included cases that involved different parts of the server installed on different OS's at the same time.

Normally, multi-platform testing is greatly complicated by issues that are reproduced only on individual workstations or occur occasionally. This was solved by arranging communication at the QA engineer-developer level (phone calls and video conferences). The QA team also provided remote access to their machines to help developers locate the cause and fix the problem.

- Tests for integration with third-party software

The product integrated closely with Microsoft Office 2003/2007 (Word, Excel, Outlook) and databases (ACT, GoldMine). Integration tests helped us to

guarantee high quality of integration and avoid influence on third-party applications.

- Localization and internationalization tests

The product is translated to more than 15 languages (among them English, Spanish, French, Italian, Hebrew, and Greek). Localization and internationalization tests ensured that the product worked well under different languages and considered language and cultural specifics.

- Installation and licensing mechanisms testing

Installation and licensing mechanisms testing was done to guarantee seamless installation process, error-free operation of the application after the installation, and correct storage of the licensing information.

- Stress testing
- Performance testing

Technologies used

Operating systems: WinXP, Vista, Win2003 Server, Win2003 Terminal Services, Win2000 Server, Win2000, Win98, Localized OS

Defect tracking system: Rational Clear Quest, Team Foundation Server

Other tools: VMWare, Virtual PC 2004, Ashampoo UnInstaller Suite

Success

- A full set of structured testing documentation from QA (testing results, final reports, quality estimation, lots of enhancements offered).
- The client's time-to-market decreased.
- Costly redevelopment was avoided due to timely QA feedbacks.
- The market share increased up to 42%.
- It was easy to resolve all major problems and arrange the fixing process independently.