

Functional Testing of Information Access and Control System

Customer

The customer is a leading vendor of taxonomy solutions providing a wide range of products for managing the whole information lifecycle— from the creation and upload of materials to information search, navigation and access.

Company	<i>Taxonomy Solutions Vendor</i>
Country	<i>United States</i>
Business Domain	<i>Information Technologies</i>
Services Rendered	<i>✓ Functional Testing</i> <i>✓ GUI Testing</i> <i>✓ Regression Testing</i> <i>✓ Migration Testing</i>
Communication Model	<i>QA Outsourcing for a Development Company</i>
Duration	<i>8 Months</i>
Labor Efforts	<i>8 Man-Months</i>

Project

The subject of the project was an enterprise content management system (ECMS) which provided a full range of tools for creating a standard set of categories and terms for use in information access and content management. This set would combine tools for creating sets of taxonomies and thesauruses for administrators and a web-based directory service to allow any users to access the data created

Challenge

When searching for a service, the customer kept in mind the following main requirements for the project:

- Checking the implementation of enhancements to the existing product as the 1st phase. The customer's clients had been using the product for some years by the time.
- Releasing a brand-new version of the project as the 2nd phase. The previous version was initially developed by the customer's team but the Customer was not satisfied with the quality of the product as it was.
- A seamless process of migration to an updated and, further, to a new version of the product, which would fully exclude any damage to the existing data.
- A special QA outsourcing model and cooperation with the remote customer's development team.

Solution

After analyzing the requirements, QA outsourcing was stated as the cooperation model for the project. The customer would duly benefit from its features — independent third-party quality control and presumed reduction of the project's development cycle.

The testing process started with the implementation of the 1st-phase enhancements and finished with the 2nd phase release of the product. To be sure that the project would comply with all the requirements, the QA team performed the following activities:

- Investigation of the existing product functionality and creation of test documentation (test cases and test scenarios) to cover all the functionality, simplify reporting and facilitate progress control for the customer
- Functional and GUI testing on Windows XP and Vista:

- 1st phase — full testing of the newly added functionality to ensure the successful implementation of the enhancements
- 2nd phase — a full range of tests to maximize the project quality
- Regression testing of the 1st-phase (old) functionality to ensure proper implementation of enhancements
- Complex testing of the data migration between different project versions:
 - Creating a number of datasets to cover all the possible cases of product updating
 - Updating the product from the old version to the enhanced and brand new ones
 - Manual check of data integrity directly in the database and from the product itself

Cooperation with Development Team

The cooperation strategy of the QA and remote development teams as well as enhancement requests by the customer were based on using Bugzilla — a web-based defecttracking system where defects and enhancements information was stored. All the defects, functionality and other issues were mostly discussed using instant messaging systems and VoIP technologies. All the parties — the QA team, the development team and the customer — were involved in discussions. Such a strategy tremendously reduced time expenses for solution-finding and was one of the key points in finishing the project successfully and on time.

Technologies Used

- **Browser:** Internet Explorer 6.0, 7.0; Firefox 2.0
- **Operating system:** Windows XP Professional, Windows Vista
- **Defect-tracking system:** Bugzilla
- **Development tool:** Sun JDK 1.4.11, 1.6.0
- **Database tool:** PostgreSQL
- **Other tools:** Oracle Containers for Java EE

Results

- A strict quality assurance process was developed for the project. The customer was very satisfied with the transparency of the quality control process and its results.
- The customer was very impressed by the quality of the enhancements applied to the stable version of the product. The customer's clients could migrate to the updated product without any data loss.
- The quality of brand-new software version was stabilized due to effective work of the QA-team. As a result, the customer's satisfaction from the product increased dramatically and the product was released earlier than planned.
- Close cooperation between the QA and the development teams led to minimizing all the possible project risks.