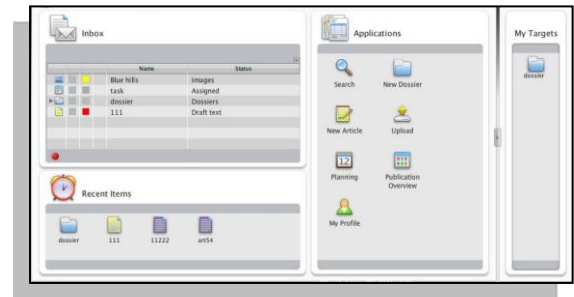# Product Testing across various platforms.

Executive Summary

Ever thought of launching a product in the market without being tested? Never would a business launch a product before testing it. Also think of the profit you might miss out, if your product is restricted to a single platform, as there are a lot of potential users for your product in the market worldwide but, they might not have the platform required to access your product. Catering these factors in mind, one of our clients, approached Mindfire Solutions for solution. They also wanted professional testers to work on it and that too not at their end. They had existing software which is used by customers worldwide across multiple platforms and they wanted to ensure that their product functionality is tested with the best of quality assurance processes with a focus on platform compatibility.

Though the client had prepared test cases to test the functionality of their product, they were not comprehensive enough for Mindfire's QA testers as it did not cover all possible scenarios, and touching only the basic functionalities. Mindfire's QA testing unit took the initiative by designing test cases for them to come up with multiple scenarios to test functionality. Test cases were tracked regularly to observe the functionality of the application and make changes accordingly. Thus, Mindfire exceeded client's expectation and ensured that best of service was delivered to the client by delivering a bug free application that could run on any platform.

About our Client

Client Publishing Software Provider| **Location** USA | **Industry** Publishing

Business Situation

Testing of a product, so that it would be functional across various platforms, is a tedious task. QA Testers need to check the functionality of the application across platforms, report if issues occur and also regularly track in order to avoid unusual issues. In order to fetch best results through professional QA testers who would not work at client's end, a software provider to publishing house in USA had approached Mindfire Solutions.

Mindfire's QA team took immediate charge of the project and designed suitable test cases to follow, in order to cover every possible scenario for best of quality assurance processes to be executed with a focus on platform compatibility. The application was tested across multiple operating systems ranging from Windows 7 and others such as Windows Vista, Windows XP, Windows 2003, Mac 10.4, Mac 10.5, Mac 10.6. For all these operating system's the team at Mindfire created the environment on different hardware and server resources such as

Mac, Windows 2003 and Linux. Initially, the client used Waterfall model as the SDLC but, Mindfire used Agile testing methods to ensure highest quality of service delivery to the client. Mindfire's efficiency was proved when the client requested to test all their products and also increased the number of testers from 2 to 13.

Solution Details
The Mindfire Solution

With the client's intent keeping in mind, Mindfire designed test cases to test the functionality of the product. Though the client had an existing test case in place, it was not enough for Mindfire's testing unit as it did not provide enough scenarios to test the application. It was just the basic functionalities which the test cases touched. Mindfire's QA team regularly monitored the test cases to track the changes in the functionality of the application and then simultaneously changed it in the test cases as well. Test cases were put on common server so that any person involved in the project can view it at any point of time. QA team also added all fixed issues as part of the test cases which enhanced the test script in uncovering more scenarios. Some important issues were also uncovered when the testers performed functionality/regression/installation and compatibility testing.

Our QA testers used the best and latest techniques then available in terms of process and methodology. Waterfall model was used by the client as SDLC when the project started but the QA team moved to Agile testing methods after mutual agreement to ensure highest quality of service delivery to the client. This method is based on iterative development where requirements and solutions evolve through collaborations between the scrum teams in a project. Our testing team followed certain standard set by market leaders. They used to follow a 3 weeks sprint model wherein follow up meetings are held to assess the progress and also set future goals to the scrum teams in the sprint. There were also daily scrum meetings to analyze progress on various milestones and resolve issues if any through discussions.

Tests were conducted at client's end as per their requirement using multiple operating systems ranging from the then recently launched Windows 7 and others such as Windows Vista, Windows XP, Windows 2003, Mac 10.4, Mac 10.5, Mac 10.6. Different environment were created to test the application on different hardware and server resources such as Mac, Windows 2003 and Linux for all these operating systems.

Thus the product was successfully tested for the client at their end by our able QA testers to deliver the client with a better performing application that brought in laurels for the client.

Achievements

The client used Waterfall model as the SDLC when the project begun. Improvisation was needed by our testing unit while changing track from Waterfall model to the Agile testing methodology. The end result delivered was very much satisfactory and the decision proved to be a fruitful one. Monitoring the test cases was also very cumbersome, which our team handled well to overcome the issues and as a result provided a suitable environment for the product's functionality across platforms.

Technologies

PHP, C/C++, My SQL, MS SQL, Oracle

Final Results
Software System

Web Servers

Web server	Enterprise version					
	4.0.x	4.1.x	4.2.x	5.0.x	6.1.x	7.0.x
Microsoft IIS 6 [Win]	■	■	■	■	■	■
Microsoft IIS 7 [Win]	☐	☐	☐	☐	■	■
Apache 1.3.x [Mac]	■	■	■	■	☐	☐
Apache 2.0.x [Win]	■	■	■	■	☐	☐
Apache 2.2.x [Mac/Win]	■	■	■	■	■	■

Databases

Database	Enterprise version					
	4.0.x	4.1.x	4.2.x	5.0.x	6.1.x	7.0.x
MySQL 4.0.x	■	☐	☐	☐	☐	☐
MySQL 4.1.x	☐	■	■	☐	☐	☐
MySQL 5.0.27	☐	☐	■	■	■	■
MySQL 5.1.x	☐	☐	☐	☐	■	■
Microsoft SQL Server 2000	■	■	■	☐	☐	☐
Microsoft SQL Server 2005	☐	☐	■	■	■	■ ❷❸
Microsoft SQL Server 2008	☐	☐	☐	☐	■ ❶	■ ❸
Oracle 9.2.x	■	■	■	■	✕	✕
Oracle 10.2.x	☐	☐	■	■	■	■
Oracle 11	☐	☐	☐	☐	■	■

Fig: InCopy   *Fig: InDesign*

Client Operating Systems

Operating system	Enterprise version					
	4.0.x	4.1.x	4.2.x	5.0.x	6.1.x/6.2.x/6.3.x	7.0.x
Microsoft Windows 2000	☐	☐	☐	☐	☐	☐
Microsoft Windows XP	■	■	■	■ ❶	■ ❶	■ ❶
Microsoft Windows Vista ❷	✕	✕	✕	■	■	■
Windows 7	✕	✕	✕	☐	☐	■
Apple Mac OS X 10.3	☐	☐	☐	☐	☐	☐
Apple Mac OS X 10.4	■	■	■	■	■	☐
Apple Mac OS X 10.5	☐	☐	☐	■	■	■
Apple Mac OS X 10.6	☐	☐	☐	☐ ❸	■ ❹	■

Server Operating Systems

Operating System	Enterprise version					
	4.0.x	4.1.x	4.2.x	5.0.x	6.1.x	7.0.x
Microsoft Windows Server 2000 SP5	■	☐	☐	☐	☐	☐
Microsoft Windows Server 2003 Standard SP2	■	■	■	■	■	■
Microsoft Windows Server 2003 Standard x64	☐	☐	☐	☐	☐	☐
Microsoft Windows Server 2008	☐	☐	☐	☐	■	■
Apple Mac OS X Server 10.4.x	■	■	■	■	■	☐
Apple Mac OS X Server 10.5.x	☐	☐	☐	☐	☐	■
Apple Mac OS X Server 10.6.x	☐	☐	☐	☐	☐	■ ❷
RedHat Linux 3 ❶	■	■	■	☐	☐	☐
RedHat Linux 5 (32/64 bit) ❷/ CentOS 5 (32/64 bit)	☐	☐	☐	■	■	■
OpenSUSE 10.3 ❶	☐	☐	☐	■	■	☐
OpenSUSE 11.1 (32/64 bit)	☐	☐	☐	☐	☐	■
Sun Solaris ❶	☐	☐	☐	☐	☐	☐
Other Linux distributors	☐	☐	☐	☐	☐	☐

Fig: Different Web servers   *Fig: Different Databases*
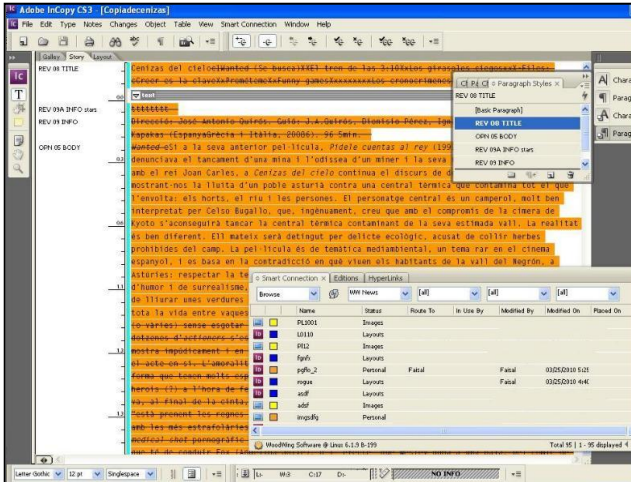
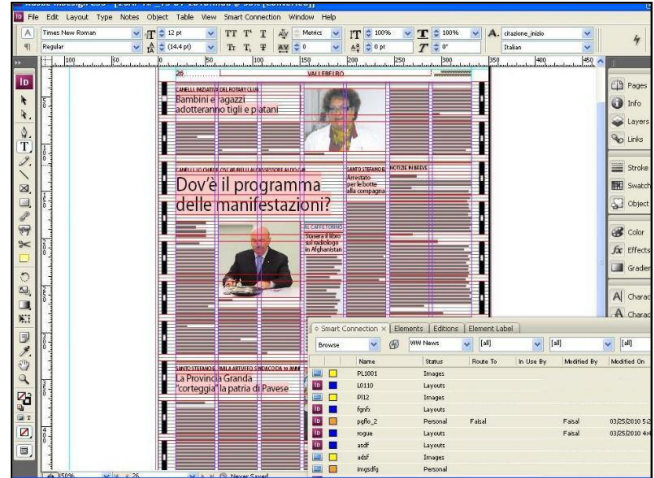*Fig: Different Client Operating Systems*

Fig: Different Server Operating Systems

Customer Benefits

Agile testing methods used provided the client with highest quality of service delivery and also the product to be completely functional on every platform. The client received excellent responses from customers on the functionality of the product.

Future relationship

The client initially started with testing of a single product with 2 QA testers. But, after Mindfire's incredible performance and delivery, the client requested to provide testing support to its entire product range and also increased the team size to 21, testing multiple products. Relationship with the client is now into the 6th year and we hope that it continues to grow.