

THE PROBLEM

The application under test was a web based portal, which was to be tested across multiple operating systems and browsers. The application was based on a collection of pages and forms with added features such as RSS and social networking. In this case study we have addressed our experience of testing this application's browser compatibility over different platforms.

Client wanted to validate the behavior of their application over different platforms. This involved the development of various OS and browser combinations and generating these specific environments. Functional testing was to be performed across each of these combinations. For that we had to elicit and analyze client's testing requirements, suggest improvements and at last establish a comprehensive yet efficient bug reporting mechanism.

THE APPROACH

Kualitatem QA team started off with exploratory testing to gain domain knowledge while a reporting framework was established and the development team got familiarized with how the testing cycle would work. Test processes and test environment were designed and established along with the test plan.

Subsequently, within a short time span, the cycle (bug report, bug fix, and build update) was established and the team got busy with testing user commands, data manipulation, content search, business processes, user screens, and various integrations. The QA team reported and verified existing bugs and associated ripple effects, if any.

The second week was dedicated to the Compatibility testing i.e. verification of the application on all different platforms as per the client's requirement. For details refer to Table 1.

OS	Browser	Version
WIN Vista	IE	7.0
	Firefox	2.0
WIN NT	IE	6.0/7.0
	Fire fox	1.5/2.0
WIN 2000	IE	6.0
	Fire fox	1.5/2.0
WIN 98	IE	4.0
MAC 10.8	IE	5.2
	Fire fox	1.5/2.0
	Safari	41
Linux Fedora	Fire fox	1.5/2.0
Ubuntu Dapper 6.6	Fire fox	1.5/2.0

Table 1

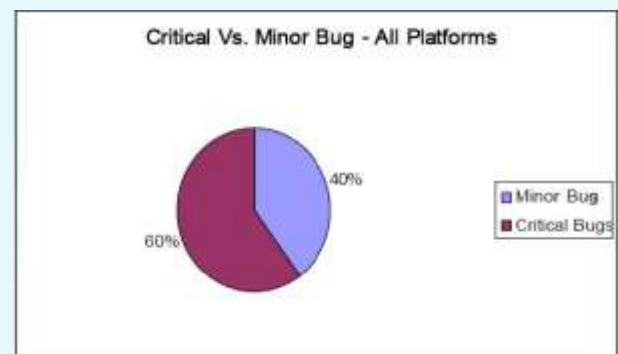


Figure 1

It is evident from Figure 1 that 60% of the bugs found during this activity were of critical nature. One interesting observation was that these critical bugs were at times only OS/Browser specific which meant that the application might not be able to even run in any other OS/Browser. This can be seriously hostile for those organizations that deploy B2B or B2C applications over internet.

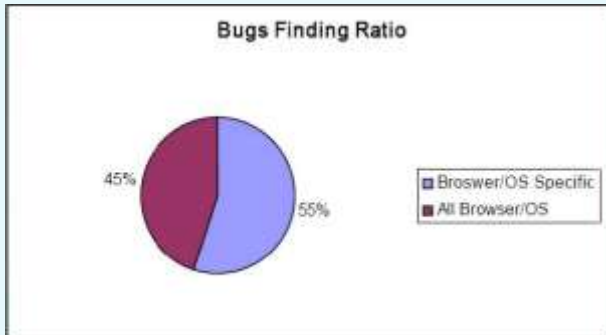


Figure 2

Figure 2 illustrates the importance of performing platform testing. It is evident that 45 % of the bugs were detected from all the Browser/OS Whereas 55% of the bugs were found only in any of the specific Browser or OS combination.

If we analyze figure 1 and 2 we can safely conclude that Cross-browser testing is a critical element in the development lifecycle of any web based application. Ignoring compatibility testing may result in serious flaws within the product which will have a negative effect on user satisfaction.

SUMMARY

Kualitatem provided seamlessly integrated software quality assurance services using an innovative framework and latest industry standards. In order to ensure product reliability and quality, a seamless bug reporting and fixing environment was created.

Test engineers at Kualitatem added substantial value to the product by suggesting improvements in process flows and GUI after testing and checking the outcomes on different platforms. Several bugs were located that were not a part of test plans and test scenarios. Identifying these ripple effects clearly indicates the benefit of experience, skill, multidimensional thinking and independent verification and validation. Compatibility testing helped improve overall product quality and helped the client to launch their product with reliability and confidence.