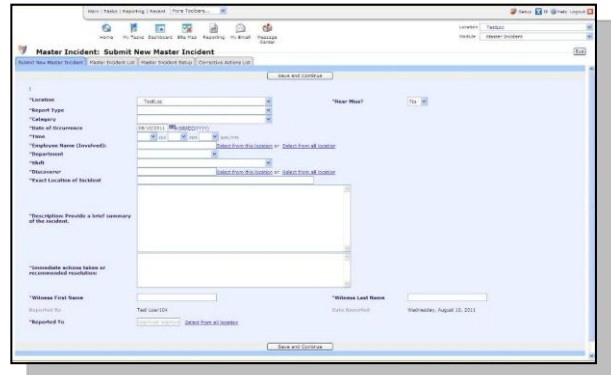# Environment Health & Safety Application

A QTP test case

Executive Summary

Imagine so many software applications clubbed into one bigger application to address every possible aspects of a certain domain. Such an application has to be a complex yet robust. The management team has to ensure that every functionality works per requirement, the application has better usability, it performs better every time. Hence, it needs a better QA process. With every change request, small or big and any enhancement features coming, there has to be several builds over a period of time. With every new build coming, testing was needed thoroughly in all modules, so as to ensure new implementation/change in code doesn't adversely affect other parts of the system. This means repetitive task for testing folks which they often feel monotonous.

Here comes the idea of automating the testing process. The client was looking for a reliable service provider who can understand their need and accordingly come out with a cost effective solution. They approached Mindfire Solutions for the job and it has been over a period two years Mindfire is associated with them, delivering high quality automation scripts.

About our Client

Client Service Provider | **Location** Canada | **Industry** Environment & Health and Safety

Business Situation

The client firm is a top notch service provider in Environment & Health and Safety domain whose clientele consists of many fortune 500 companies. It has several customizable projects which can be used for the aforesaid industries and some projects designed exclusively for specific industry. Broadly all the projects come under two categories:

Environmental Management System (EMS): The Environmental Management System is a web based solution to manage Environmental data, documents and activities across multiple locations. It has several sub-modules such as Air, Water and Waste Management, Legal Requirements and Compliance Management, Environmental Sustainability Management etc.

Health & Safety Management System (HSMS): The HSMS provides a flexible solution to manage an organization's health and safety program. By using this application the management can easily keep track of risks, track and react to incidents and hazards, achieve and maintain OHSAS 18001 compliance. The HSMS has several software applications in it such as Incidents and Risk Management, Legal Requirement Management, Document and Training Management etc.

Solution Details
The Mindfire Solution

Mindfire Solutions understood each of the functionality of the application through various sessions of discussions before actually going into automating the application. Mindfire's automation engineers attended several training sessions on specific modules, clarified their issues by asking questions, indulged themselves in manually testing the module at least once to get hands on knowledge of the application. They noted down anything that looked suspicious and reported them to the client. In a way they served manual testing process up to some extent. It is when they got a feel of stability of the application, the automation process started. Mindfire team chose QTP to be the automation tool for various reasons which are out of scope of this document. In a nutshell, it can be said that nothing other than QTP would have fitted to automate the application because of the way it has been designed.

The automation process starts with writing automation test cases from where scripts were written. Mindfire's automation team has designed hybrid frameworks to carry on the automation process. While writing scripts, many things were taken into consideration such as functionality, flexibility and maintainability. Better maintainability takes care of the scripts not going obsolete when the application changes over time. Once a script has been developed, ran, and tested, it is handed over to the client. Anyone from the client side can run the script. The scripts were designed in such a way that he/she doesn't need to know QTP.

Achievements

Mindfire's automation team has handled a lot of challenges during the course of this project. They have developed hundreds of powerful test scripts for every module which has drastically reduced the testing effort as well as time that a manual process would have consumed.

Technologies

QTP.

Final Results
Software System
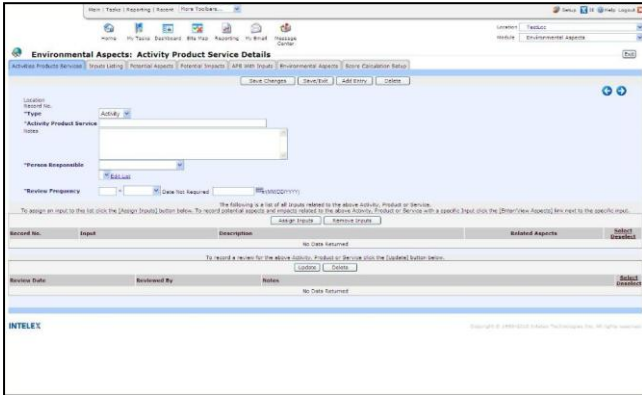

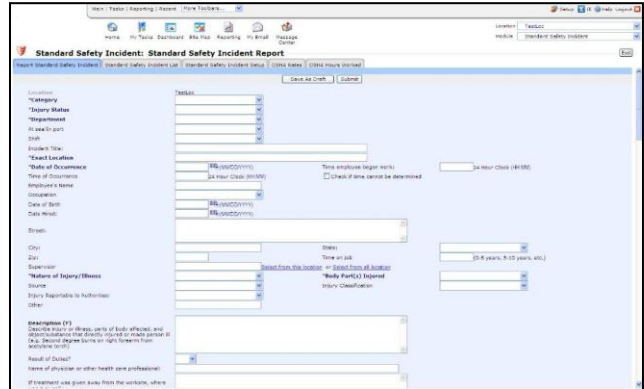*Fig 1: Environmental Aspect*   *Fig 2: Safety*

Customer Benefits

The automation process has reduced almost 80% of testing effort and time. It has significantly reduced the cost the client was bearing for testing efforts prior to automation.

Future relationship

The client was very satisfied with the capability of Mindfire testers and is still continuing his project with us. After judging the quality of work at Mindfire, the client who was a bit reluctant to involve too many testers on the project has now doubled the team size.