Designing an InfoPath Product Scoping Tool for UL

Zach Hein, Matt Palodochuck, and Xinyang Chen

Overview

Underwriters Labs (UL) is a third party testing company that tests commercial products for safety. Before any testing is done, UL devises a quote for their customer. In the past, different UL branches have given different quotes for the same job. Because of this, companies now "shop around" to find the best price.

To address this problem, three interns from Camas High School were given the task of designing and programing an InfoPath computer program that could accurately estimate the costs and specifications of a proposed product certification.

For this program to be successful, it would have to:

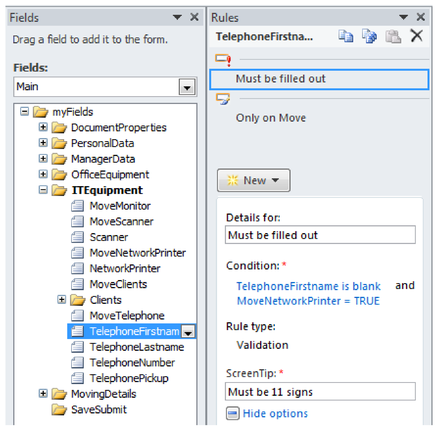
- Be easily maintainable by UL engineers
- Use product qualities rather than component names to specify a testing regimen
- Demonstrate the potential applications of InfoPath

Materials and Methods

At the beginning of the internship, the interns had no experience with InfoPath. Because of this, their first step was to familiarize themselves with the software. After getting to know the program, they started to form a process to develop the tool. The main points of this process were:

- centralizing data
- developing a design theory
- formatting
- Programming
- debugging

Top Left: representation of work space with white board and projector



Top Right: screenshot of InfoPath software that shows fields, groups and rules.

Bottom: group after presentation to board including mentor Scott Varner.

Results

Following completion of the tool, a conference was held with company managers to display the final product. The managers were very impressed and saw great potential for the tool and InfoPath as a whole at UL. Later, the tool was presented at the North America Global Leadership conference where it was well received. The tool was recently published to the UL SharePoint server and is undergoing refinement before it is deployed globally.

Discussion

Although the InfoPath tool was widely considered a success, there are aspects of the tool that could be further improved.

- Refine data
- Simplify programming

However, the final tool was considered a success. It was deemed easily maintainable by engineer Timothy Post, and mentor Scott Varner was very pleased. In addition, the tool demonstrated the future uses for InfoPath, and also showed how product qualities are more accurate than component specifications in accurately determining a testing regimen for product certifications.

Conclusion

This tool was successful in its role as a prototype InfoPath scoping tool. UL is currently in the process of revising the program in collaboration with other UL branches. In the near future the refined sibling will be used globally by UL. This will likely translate to an increase in quoting accuracy and efficiency.

Special Thanks

We would like to thank UL for providing us this amazing opportunity given this real world problem. Specifically we would like to thank Scott Varner for his time and patience. Additionally, we would like to thank Carla Ouchi and Greg Ray for their contributions. Finally we would like to thank our project coordinators, Mrs. Newman and Mrs. Downs for their part in organizing the internship and keeping track of our progress..