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Incanto Case Study

Lloyds TSB Credit Risk: Testing Business Rules Systems

The Business Problem

In January 2003 the Personal Loans team at Lloyds TSB introduced a new loan pricing system which was implemented in the bank's Chordiant enterprise software. The underlying business rules for this system are many and complex, and also require frequent modification to keep up with changes in the business environment. Lack of agility in these systems directly affects the bottom line. As with any business critical system, making changes poses a high level of risk and necessitates a demanding testing strategy. Business rules systems typically require extensive manual testing, and it is very difficult to ensure comprehensive coverage. When these problems are combined with the inevitable departmental pressure on resources, it became clear that it would be impossible to perform the requisite level of testing in time. An innovative solution was needed.

The Proposed Solution

It was decided to automate the process of testing by using a new decisioning toolset - **Incanto** developed by Qualia Systems. **Incanto** has a fast prototyping environment which would make it possible to quickly replicate the rules used in the live Chordiant system. In addition, **Incanto** was designed with an integral test data generator, allowing the team's business analysts to generate volume data designed to provide full coverage of the system. The test data automatically generated by **Incanto** could then be run through both systems, and the results compared.
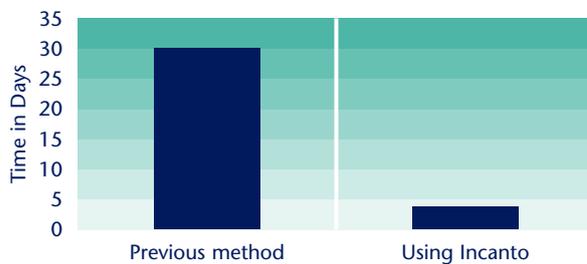
The Incanto Testing Project

Steve Cornwell from Credit Risk worked with Ryan Godridge from Qualia to implement the loan pricing rules in the **Incanto** system. Once completed, the executable model consisted of more than 1000 decision nodes, with 1621 possible paths records could take through the system.

The implementation was completed in four days - representing a substantial saving of development time. The project was initially allocated six weeks.
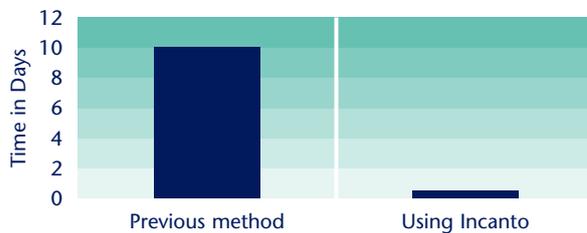
These levels of savings have continued to apply during ongoing modifications which now can be accomplished in half a day rather than two weeks.

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During the four days of the project, **Incanto's** test tools were used to generate test data to cover the entire scope of the system. The rules were so complex that full coverage generators would produce in excess of 35 billion test cases. **Incanto's** visual feedback illuminates those areas of the test data which can be pruned, while still retaining full coverage. The final test run of 2 million cases takes less than an hour.

Loans Project: Development Time Saved

Loans Project: Ongoing Modifications - Time Saved

Project Outcome

The department has significantly reduced the risk of unexpected outcomes from these complex business strategy implementations, and the rules have been maintained error free for the duration of the project.

Incanto has proven to be a powerful tactical decisioning tool. Lloyds TSB Credit Risk department is currently piloting ways of using it to extend their decisioning capability.

For more information, please contact

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