

The Development of Vysits

Challenge

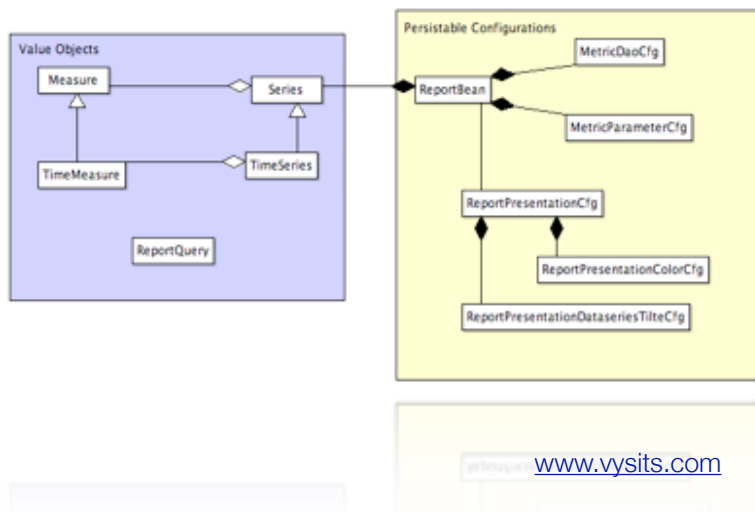
After multiple years working in the Destination Marketing field, with DMO's and their marketing partners, our company concluded that there was a need for a tool that provided these groups with cross-channel strategic information to assist them with their decision making process.

We felt that we could create a truly differentiated product by leveraging the usability and reporting capabilities of Web 2.0 AJAX functionality, and could tailor the product based on our specific experience in the destination marketing industry. The core idea was to develop a product that could show trended conversion information associated with marketing efforts.

With this in mind, we assembled an small engineering team internally to design and implement the prototype, and then work with an expanded team to prepare the final release.

Solution

During initial discovery, we leveraged our team's experience with JasperReports and Crystal Reports and also assessed emerging reporting tools such as BIRT and JFreeReports. Based on this evaluation, the team then prepared a rapid proof-of-concept using Jasper Reports. The same exercise was repeated with open source business intelligence tools, with an assessment of Jasper Server and Pentaho prepared along with a proof-of-concept deployment of Jasper Server.

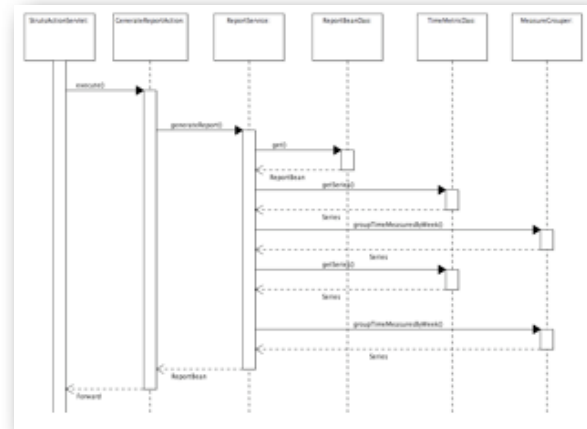


For the first client-facing prototype, we developed a data entry and reporting framework. The team extended proven J2EE frameworks to rapidly prepare the model, service, and data entry tiers of the application. The team also

applied generics, Struts, Spring, and Hibernate to provide a modern, elegant solution. The reporting framework featured innovative techniques for dynamically generating JasperReports and JFreeCharts as well as integrating with Flash chart components from FusionCharts and their XML API. At this point, user interface designers were brought in to work with the engineering team to provide a clean, professional look and feel for the prototype.

The next step was to finalize the reporting requirements, choosing a reporting interface inspired by Google Analytics and a reporting framework inspired by JasperReports that would allow a business analyst to their own create report definitions online.

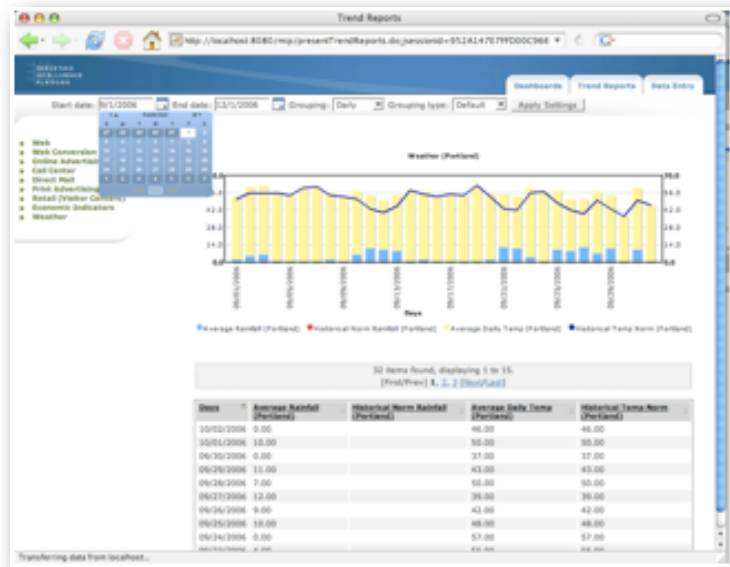
With a two-month development cycle available to prepare the final phase one product, focus shifted to developing an ETL (extraction transformation load) and data-warehouse framework and integrating with various live data sources. Next came development of the back-end analytics framework, the interactive AJAX-Flash user interfaces, followed by the data management interfaces. Lastly, the reporting framework was finalized: a web-focused, flexible XML service oriented architecture that would simply use off-the-shelf JavaScript, Java, and Flash components and toolkits to provide the sophisticated analytics interfaces. Once these steps were completed the team quickly refactored the original prototype application, developing the final solution in a series of three-week iterative development phases.



Results

The result is a cutting-edge business intelligence platform designed specifically with Destination Marketing Organizations in mind.

Utilizing a flexible, elegant J2EE core application, the service-oriented design serves as solid foundation for future enhancements, while the fluid AJAX user experience of the user interface provides users with performance comparable with desktop applications.



Key Technologies

- Red Hat Enterprise Linux
- Jboss 4.x
- MySQL 5.0
- Java APIs and Tools: Swing, Struts, Tiles, Hibernate 3
- Interactive AJAX functionality leveraging Prototype and script.aculo.us Javascript frameworks
- Additional interactive functionality by using Flash with FusionCharts v3 reporting components