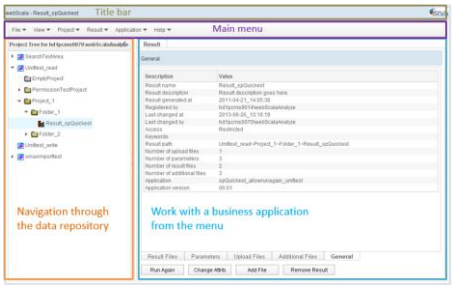
HMS Analytical Software

HMS Analytical Software uses ZK to implement its webScala system for Siemens Healthcare to analyze laboratory data.

About HMS Analytical Software

At HMS Analytical Software, we create solution for Business Intelligence and Business Analytics for more than 25 years. When it comes to simplifying data management and data analysis, with us you are in competent hands from beginning to end: Our service portfolio ranges from consultation through implementation, culminating in training and support.



"the framework hides the complexity of browser-specific JavaScript from the developer, which makes user interface design and implementation more productive"

ZK x HMS Analytical Software

For analyzing laboratory data, our customer Siemens Healthcare has been using the SAS system for many years.

In order to establish an end-to-end platform for data analysis and result storage, we built the webScala system with the following key features:

- web user interface for performing all data analysis tasks: data upload, analysis execution, result inspection, result archiving, search within results
- easy integration of predefined analysis applications, which are implemented as SAS Stored Processes
- storage of results, with a role-based security concept applied to a folder structure
- possibility to re-run saved results with original data and parameter settings

Main technologies used are: ZK, Java, Oracle RDBMS, Spring JDBC, SAS Metadata Server and SAS Stored Process Server.

Why ZK

The webScala user interface has been implemented originally using a proprietary AJAX toolkit named Crossvision Application Designer (Software AG). When this toolkit reached its end of lifecycle, we had to decide upon an alternative technology.

The technology challenge was to find a technology which provided the required features by allowing for a better separation of user interface and business logic than the original solution. Additionally, the new technology should be scalable to support an increasing number of users.

The considered alternatives were webCAF (based on JSF) and ZK. After evaluation we were convinced in using ZK because of the following reasons:

- simplicity, abstraction of development complexity
- easy familiarization for Java developers
- good documentation and active community
- rich set of user interface controls
- well-known reference customers

Fig. using MVVM templates in ZUL allows for flexible but decoupled views

The Best of ZK

After working with ZK for several years, we acknowledge the following values:

- the programming model supports the MVVM pattern, which encourages a clean design and good automatic testability
- good documentation and active community: questions are answered within a short period of time, many examples can be found online too
- the framework hides the complexity of browser-specific JavaScript from the developer, which makes user interface design and implementation more productive
- the framework supports CSS for customizing the user interface, which allowed us to fulfil specific customer needs

- the framework provides different levels of input validation, from preconfigured pop-ups that appear exactly where the wrong input was detected, to customized validators that can be attached to the controls

Additionally, we appreciate the feature of using templates in ZUL pages, which allows for flexible but decoupled views. As an example, we built a data-driven parameter page with different templates in one page, in order to provide server-side configuration of input controls per parameter.

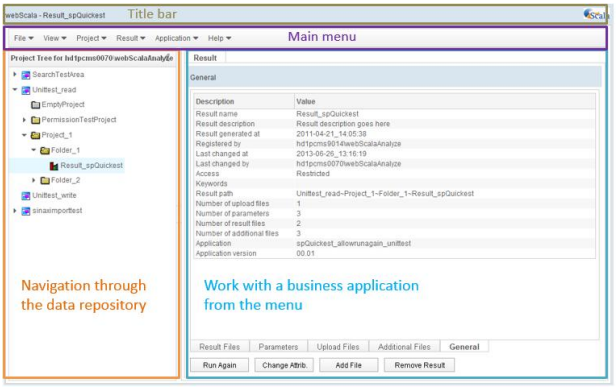
The Result

Our customer appreciated the resulting webScala user interface built with ZK, which was considered more elegant and modern. We could improve the usability by using the controls and features of ZK, while enhancing the configuration possibilities for the application administrators. Therefore, the migration to ZK had a positive impact on the customer's business process.

" We recommend ZK to customers who want to build a business-specific, interactive web user interface for easily using their server-side analytics technology (e.g. SAS, R, DBMS.)"

From the software engineering perspective, we have now a much better separation of the graphical user interface from the business logic, which makes the whole application more maintainable.

After the positive experience with the ZK framework, we can recommend it to customers who want to build a business-specific, interactive web user interface for easily using their server-side analytics technology (e.g. SAS, R, DBMS).



About ZK

ZK is the leading enterprise Java Web framework with more than 1,500,000 downloads. ZK is deployed by a large number of Fortune Global 500 companies, including Barclays, Allianz, Swiss RE, Roche, Deutsche Bank, Sony, Sun Microsystems, and Toyota, providing them with the ability to rapidly create rich Ajax enterprise level applications.

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