GBST Uses Google Web Toolkit to Improve Productivity and Create a Rich User Experience

About GBST
- http://www.gbst.com/
- London, United Kingdom and Sydney, Australia
- Global technology solutions for the financial services industry

Goals
- Deliver a rich user experience across browsers
- Optimize application performance
- Provide confidence in its technology

Approach
- Standardize on a suitable web development technology
- Achieve faster, more consistent development
- Leverage existing skill set

Results
- Strong productivity gains using current Java skills and Developer Mode
- New capabilities such as dynamically updated diagram for transaction status
- Eliminates browser compatibility issues for development and clients
- GBST clients feel good about the strength and stability of Google

Note: The information for this case study was provided by GBST, a provider of technology services to the global financial services industry.

GBST is a global technology services company providing securities transaction and client accounting solutions, wealth management solutions, and professional design and development services to the financial services industry. With operations and 300+ employees based in Australia and the United Kingdom, GBST has over 20 developers using the Google Web Toolkit (GWT).

- The GBST Global Broker Services division offers Syn~™, a modern, highly scalable, rules-based transaction processing engine which facilitates the highest levels of STP/STEP in the global capital markets. A core differentiator for Syn~ is that business processes are stored as data in Syn~, not in computer programs, and configured in a modeling environment not through programming, thereby reducing greatly the time to market deliveries. Syn~ utilizes GWT technology to provide a rich, scalable front end for system users.

- For Wealth Management, Composer™ offers a highly configurable solution for the management and administration of investments. The GWT-based ComposerWeb™ solution offers a comprehensive and extensive web front-end application, enabling advisers and investors to administer portfolios from pre-sales planning through to general portfolio maintenance, with an easy-to-use view into the back-end database.

According to CTO Isabel Sanchez, GBST has been an early provider in the Australian market with both divisions enjoying majority market share among Australian brokerages, and is rapidly expanding into the UK market. Retail and institutional clients include UBS, CreditSuisse, Black Rock, ING, ITG and many more. We spoke with Isabel, Andy Moorley and Jonathan Denly to learn more about why they use GWT.

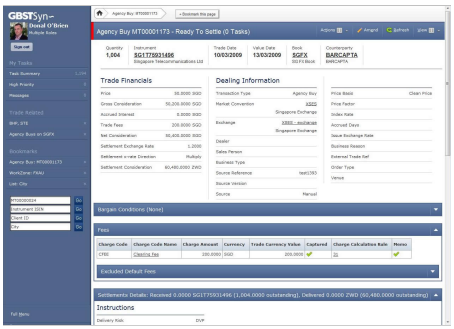
Challenges Faced

Both Syn~ and Composer are written in Java, however the user interfaces to both applications have been re-written in GWT. GBST needed to “rewrite the front-ends of these applications to deliver the best user experience in a more flexible web user interface” according to Andy Moorley, Business Technology Consultant, Global Broker Services. They wanted to optimize and standardize performance across browsers, while also improving developer productivity to achieve faster time-to-market.

Because they “did not have a lot of experience in browser and web technologies,” says Jonathan Denly, Composer Solution Architect, Wealth Management, “it was also important to leverage their existing Java skill set.”

Google Web Toolkit (GWT) is a development toolkit for building and optimizing complex browser-based applications. Its goal is to enable productive development of high-performance AJAX web applications without the developer having to be an expert in browser quirks, XML HTTP Request, and JavaScript. Helping to create applications that run across all major browsers, GWT provides substantial productivity gains, improved flexibility and optimized performance. It is open source and completely free.

For more information, visit us at:
http://code.google.com/webtoolkit/



"In many ways, GWT has developed even faster than we expected; it has exceeded our expectations in terms of stability and development speed of the platform."

Andy Moorley, Business Technology Consultant, Global Broker Services, GBST

GBST further wished to standardize across products on a suitable web development technology that was backed by an organization whose strength and stability would inspire confidence from its clients.

Customers Benefit

Prior attempts at writing web versions in Struts and non-Ajax frameworks could not deliver the user experience GBST customers required. Obvious gains from GWT include an enriched user experience, including a faster and more process and user-oriented UI, with real-time user feedback and validation as screens are modified. Users also experience high performance across browsers and consistency of look-and-feel through GWT template use, while CSS styling and Single-Sign-On support allow seamless integration with other web applications.

Customers can easily deploy their GWT-based applications across global organizations, with the ability to manage user performance and load across large scale deployments. "With clients in several countries," says Moorley, "the fact that Internationalization is provided at a fundamental level also offers key functionality."

GBST clients also enjoy new capabilities made possible by GWT. In Syn~ for example, Moorley describes the need to automate the movement of transactions through a bank, and wanting to provide a diagram that shows the status of a transaction, pinpointing where delays are occurring. Moorley says that "GWT allows us to dynamically update a flow chart on screen, which we found difficult to do in a page-based web solution."

According to Denly, it is also clear that GBST clients feel good about the strength and stability of GWT, and the fact that it is open source. "Clients know the code is available, recognize that GWT has a good ecosystem with lots of third party components, and appreciate the fact that GBST technology is backed by a name like Google."

A GBST Development Win

The move to GWT has provided a number of internal benefits to GBST as well. According to Moorley, "GWT provides a single environment for our development, but uses a familiar Java-based technology and toolset that minimized our learning curve."

Moorley and Denly both attribute additional productivity gains to the Developer Mode in GWT, in which Moorley says "you can run a web screen in a browser but also debug in a familiar development environment, a feature that nobody else offers." Denly adds that Developer Mode facilitates "a fast turn-around when working on the front-end." Using templates for efficient creation of screens, both the Syn~ and Composer teams also experience faster development cycles. While rapid development capabilities make it easy to facilitate client processes, Moorley explains that they also make it possible to offer clients the ability to "white-label web screen branding to be end-client specific."

In addition to helping the end user, cross-browser compatibility simplifies the development process. Denly says that "GWT lets developers manage the front end without having to deal with the browser, allowing them to easily provide cross-browser support in Composer."

Denly and Moorley also appreciate how the **GWT RPC** framework lets you communicate with a backend server, transparently making calls to Java servlets. GWT takes care of low-level details like object serialization, allowing the contents of a data object to be moved out of one piece of running code and either transmitted to another application or stored outside the application for later use. Moorley notes that "GWT handles server interactions without writing extra code."

A Technology for the Future

Moorley summarizes his experience, “In many ways, GWT has developed even faster than we expected; it has exceeded our expectations in terms of stability and development speed of the platform.”

Based on successes with Syn~ and Composer, says Moorley, “It has been decreed that GWT will be the standard technology used by GBST for web interfaces for financial institutions.” CTO Sanchez further explains that while divisions operate as separate businesses, “GWT architecture is crossing over to all the divisions.”

The company’s projects are in various stages of transition to a GWT-based front end, led by Wealth Management’s Composer products about 2.5 yrs ago. According to Sanchez, “Composer products have become the core platform for many fund managers and administrators, who tend to follow their core technology and are therefore likely to expand their GWT offerings as well.”

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