

Client

Leading electronic trading platform operator for fixed income securities, and provider of market data and post-trade services for global fixed-income markets.

Goal

Develop a platform that provided real-time pricing information on a variety of fixed income instruments.

Business Impact

Support for trading across many more fixed income securities leading to a deeper pipeline of opportunities.

Robust analytics platform

Iris developed an analytics platform to provide continuous bond pricing based on current market data thus enabling real-time pricing of US Treasuries.

Overview

Iris was engaged by a leading electronic trading platform provider specializing in fixed income securities to build software to provide powerful analytics on time-sensitive pricing information. This platform product provides users of bonds evaluation applications to view the performance of diversified fixed-income portfolios and manage risks based on real-time market data feeds. The solution delivered instrument evaluation capabilities that could be used for pricing of various fixed income sub asset classes such as US Treasury bonds.

The challenge

Previous applications of our client relied on information residing on multiple legacy systems. Cross-referencing and sharing of information was a major challenge. These systems had also led to multiple ways security was modeled and saved across systems without adequate integration. Furthermore, there was no existing solution that catered to all kinds of fixed income instruments that were available at that time. It became apparent that our client lacked a centralized, unified system that served the analytics needs of its users.

The solution

Iris built a robust and scalable fixed-income security data analytics platform to support continuous bond pricing. Proprietary algorithms are used to calculate new proposed prices for treasuries. These prices are calculated based on continuous market data flowing in from different sources – internal systems as well as external feeds from providers including Bloomberg, Markit, Reuters and TradersWeb. The calculated new prices are then sent to the users who actually trade in treasury bonds.

The solution consists of

- A server side application for evaluating & analyzing the various fixed income security instruments based on real-time market data to provide powerful analytics output for clients.
- A robust message bus architecture that relied on data available as messages from the network of internal systems and external data feeds .
- Integration of various stand-alone legacy applications into the unified server side application based on the architecture provided by a partner, a leader in real-time data provider.
- A desktop based client front-end to monitor the real-time market data processed by the server application and to dynamically configure the business rules & settings. Iris provided end-to-end solution delivery that included architecture, development, implementation and testing.

Tools & technologies

Core Java, Swing, JDK 1.7, Proprietary Framework/API, Cygwin, Messaging bus architecture

Technical highlights

- Listener-based framework to subscribe & pull real-time market data from standard industry data feeds for fixed income instruments into the system
- Robust message bus architecture with data items made available as messages from the network
- Component based framework for quick system development and easy maintenance
- Powerful and effective business rules based analysis engine for fixed income securities

The Iris advantage

Vision to Reality: The Iris was able to provide interface development and implementation support services on top of traditional software development and testing services to develop and install a production worthy solution.

Execution excellence: Iris set up a team consisting of software architects, designers, developers and implementers to provide the skill sets necessary to execute and deliver a workable industry solution.

Collaborative problem solving: Iris worked closely with the client and a premier provider of real-time market data, reference data for securities trading, time-sensitive pricing, and evaluations to develop the solution.

About Iris

Iris (www.irissoftware.com) is a professional software services organization providing its customers with high-quality, cost-effective solutions and developing mutually beneficial relationships. Iris does this through comprehensive solution offerings with best-of-breed technologies, rapidly deployable solutions, flexible engagement models and proven methodologies. This allows customers to focus on their core competencies, and concentrate IT resources on projects that directly impact their bottom-line.