

## OTHER INTERESTING PROJECTS

### **Mortgage Desk Trading Systems**

Designed, developed and enhanced several components of Mortgage Desk Trading System supporting trading of TBAs. Specified Mortgage Pools, CMOS, IA Break Out. Developed support for TBA Options including implementation of Black Schools model for TBA Option pricing, Quick Ticket – quicker ticketing application for ticketing of Agency trades. Developed a trade compute service for calculating charges. This has become basis for building similar modules for all of fixed income trading applications.

Developed a mortgage trading risk management system on top Applix real time spread sheet application.

### **Distributed Position Management System**

Architected, designed and developed ultra high speed and highly available global equities position and P&L engine. This system developed to provide real time position and P&L information to meet the needs of Citigroup's Market making system GATE, Program Trading System PTMS, Algorithmic Trading systems and Risk Management system across all regions where Citigroup's Global Equities conducts business. System is integrated with several front office and back office system to reflect accurate positions for all names Citigroup trades. System is built to run 24/6 with built in management ad monitoring capabilities and foolproof fault tolerance. It is built to handle special transactions like prior day corrections, marking to market, intra-firm transactions, multiple currencies, multiple legal entities and multiple geographic locations. Position information is distributed to recipient applications over multiple channels to meet architectural challenges of a large financial corporation.

### **Equities Middle Office**

Created architecture and design for successful implementation of middle office system of cash equities with OASYS and manual allocations, order aggregations, automated order-allocation matching, trade generation and integration with front-office and back office. This application uses J2EE technologies with POJOs and asynchronous database processing greatly increasing speed, stability and simplicity of the platform. This application uses several integration technologies including IBM MQ, CORBA, Tibco ciServer and JMS. GUI is developed using JFC/Swing. GUI connects to transaction services through a Presentation Layer service with pub/sub and command interfaces.

## **ODM**

ODM is Organizational data management application for Salomon Smith Barney. Application is used for creating and maintaining departments and organizational hierarchies and for feeding this information to various corporate applications. Each department can be viewed as part of several hierarchical structures pertaining to management, budget, tax, geography and the like. It is implemented as a 3-tier application with both MFC thick client GUI and JSP based web GUI.

## **General Ledger Integration Project**

Built several components for a project that consolidated two sets of books, tax and management, maintained for capital markets into one. As part of the project created an application to create and view well-formatted financial statements in excel for any legal entity in currency of user's choice on demand by processing reference and transactional information extracted from mainframe. This information is presented for two books that existed before consolidation for new books created post consolidation. This worked as a powerful tool in reconciling and for detecting potential defects during the project.

## **RiskView**

Architected, designed and developed RiskView. RiskView is real Time risk management system for cash equities with advanced aggregation and exposure limit monitoring capabilities for various aggregation units including trader, desk, business unit, legal entity and country. System includes real time VaR calculation. System is deployed in US, Japan and Hong Kong. System uses sophisticated aggregation and ordering techniques for real time aggregations, statistical calculations and for showing top of the book. System is built as 3-tier application with Sybase at the back-end, an advanced aggregation and calculation engine in the middle and MFC GUI in the front. System is built to serve hundreds of traders and trading desk managers. System comes with several features like end of the day desk report intended for desk managers and risk managers.