

## **Rob Appelbaum**

[enterprise-architect@appbaum.com](mailto:enterprise-architect@appbaum.com)

<http://compute.appbaum.com/robappelbaum>

### **Background**

I am a senior technology professional with over 25 years of enterprise experience in the software development and financial services industries. I have architected and implemented technology solutions for large financial institutions, venture funded software startups, and publicly traded software vendors. Most recently, the systems I design, implement and support are a critical component of the global financial system. The clearance systems settle almost ten trillion dollars a day in transactions on behalf of the US Federal Reserve. The collateral management systems utilize over five trillion dollars of collateral to back other transactions such as repurchase agreements and initial margin for derivative based transactions.

### **Separation Architect**

Most recently I was the primary technical architect driving the structure and creation of a new corporation: BNYMellon Government Security Services, Corp. The main goal of the company is to ensure the long-term viability of the Broker Dealer Services supporting Fed Book Entry and Domestic Triparty services even in the event of failure of BNYMellon. I focused on developing a strategic plan around technical separation via operational followed by physical separation. The plan was delivered to the Federal Reserve and other regulators as part of a larger BNYMellon Resolution Plan.

### **Division Architect**

Previously, I delivered architecture services within the Broker Dealer Services division of BNYMellon. Broker Dealers Services provides both clearance and settlement services as well as collateral management services and help make BNYMellon a GSIFI (global systemically important financial institution). As the divisional architect, I have reviewed over 20 applications and 40 projects within the last 3 years. Applications and projects are reviewed to ensure appropriate compliance with enterprise architecture standards and also to ensure fundamental architecture soundness. That would include features like resiliency, extensibility, scalability and supportability. I also developed an architecture scorecard which allows application soundness to be quantitatively scored so that they can be compared and also tracked with respect to improving applications over time. Application owners were consulted and the quantitative aspects were evaluated.

### **Subject Matter Expert**

In addition, I played key roles on specific projects where I brought specific Subject Matter Expertise (SME). I was the lead architect and designer for the divisional tax withholding service including 871m, 305c, FATCA, NRA and Backup regulations. The withholding service supported both clearance and settlement as well as collateral management. I was the lead divisional business object modeler for enterprise data related to Payment, Clearing and Settlement (PCS) Reporting related to Recovery and Resolution Preparedness. I was also the lead architect and designer supporting the migration from the legacy authentication facilities which I had

previously designed to the more recently deployed enterprise single sign-on services. That project included support for FFIEC regulations including fraud detection and multi-factor authentication.

### **Application Owner**

Prior to that, I was the primary application owner of the divisional market data service. Application owners are responsible for all aspects of the application including interfacing directly with the business owner, providing design leadership and acting as the Agile Scrum Master.

The objective of the project is to create a single central security instrument master presented as a service. The service will allow multiple bits or vendor-supplied data to be aggregated into a single repository. This repository can be maintained via automated processing combined with manual inquiry and repair. Data includes a variety of market data and indicative data. The project leverages ETL (Enrich, Transform and Load) technology combined with RESTful Services and EXTJS based rich web-based user interfaces.

### **Senior Consultant**

Prior to being employed by BNYMellon, I was the president and owner of Effective Computing Inc. As the company's only employee and consultant, I provided design, development and support services to the Bank of New York and BNYMellon for over 12 years. I helped modernize the technology stack for their collateral management system from terminal based user interfaces to a modern J2EE architecture with LDAP services for authentication and authorization. Prior to starting Effective Computing, Inc, I worked for Genesis Development Corporation and provided senior consulting services to Instinet, Lucent, Fidelity, Boston Stock Exchange, Bloomberg, AT&T, MBNA, Sapient, Copeland Associates

### **Employment History**

- The Bank of New York Mellon - Division Architect / Application Owner – since 2012
- Effective Computing, Incorporated - Owner / Senior Consultant – 1999 through 2012
- Genesis Development Corporation - Senior Consultant - 1997 through 1999
- Expersoft Corporation - Chief Architect / System Engineer - 1995 through 1997
- Persistence Software - Senior Consultant / System Engineer - 1994 through 1995
- Informix Software - System Engineer - 1990 through 1994

### **Commercial Software**

- Oracle, Sybase, Delphix, Vertica, IBM MQ, IBM Integration Bus, Informatica, Tableau, Weblogic, Splunk

### **Languages**

- Java, JavaScript, Python, Jython, PHP, HTML, XML, SQL, Bash, KSH, C/C++

### **Open Source**

- Linux, GIT, SVN, Maven, Nexus, Jenkins, JIRA, WordPress

- Spring, Spring Security, Spring LDAP, Dozer
- Apache, Tomcat, Eclipse, Hibernate, Kafka, ELK
- Log4J, SLF4J, LogBack, ELK

### **Education**

- University of Rochester - Bachelor's Degree in Cognitive Science
- NYU and Harvard University - Post Graduate Studies

### **Publications**

- Component Strategies: "Transitioning to Components at Copeland" and "The Next Generation of CORBA"
- Object Magazine; "Persistence for Business Objects" and "ORBs and OODBMs, the Perfect Solution"
- Wall Street and Technology Magazine; "Distributed Objects Gain Ground"
- Application Development Trends; "Under the Hood of Distributed Testing"