Financial Systems Architects

An essential aspect of the finance industry is the ability for a single organization to deliver a variety of financial services, including banking, brokerage, insurance, etc. One way financial service organizations can stay competitive is to continue delivering financial services through an ever-changing variety of delivery channels and in conjunction with many partners.

There is a tendency nowadays for Financial Institutions to choose Application Service Provider (ASP) based deployment of new applications rather than an in-house deployment. Another tendency is the intensified collaboration with partners. The common theme for these tendencies is the need for integration within a community of external participants. For example, many participants in the security trading process will undergo significant changes during the upcoming industry transformation to Straight Through Processing (STP). STP is e-fulfillment for settlement of securities trades. The transition to settling trades in one day (T+1) is the most significant technology undertaking in the history of the financial services industry, larger than the Y2K effort.

This community integration tendency introduces new challenges to financial institutions. It intensifies cooperation between multiple vendors. Each financial institution has to perform integration between potentially M x N external and internal applications. The large number of semantically similar standards (OFX, IFX, Gold, etc.) impedes interoperability among vendors. Moreover, vendors tend to augment or enhance standards to "their needs", which aggravates the problem even more.

As a way to solve those problems, the Financial Services Gateway (FSG) defines an OMG MDA™-compliant UML™ model of interfaces and their semantics in order to enable interoperable access to financial services from a variety of applications. The Financial Services Gateway enables development of packages of financial services that can be deployed and accessed in a community of heterogeneous technology environments.

The following example shows how FSG may be used as a community integration facility for settling a security trade in the STP and T+1 environment:

- The first step is to define the “Community Process” from the viewpoint of the whole economic sector. This top-level model identifies the participating institutions and their respective interactions.
- The second step is to map relevant parts of the Community Process model to the business units of the participating institutions. This step identifies the processes within each business unit that are a part of the overall community process. We call these models the Community Participant Processes.

- The third step is to install a FSG in each business unit and map the steps of the Community Participant Process of each business unit to its back office systems.

The Financial Systems Gateway implements Model Driven Architecture. It provides a common vocabulary that is used to specify the capabilities of back office systems. By combining these capability specifications with the process models, the FSG allows for seamless integration of the business unit into the Community Process. FSG also provides operational capabilities to the participating business unit such as access entitlement, usage metering, and monitoring.

FSG is based on the combined experience within Financial Services Architects in two areas:

- Development of back office integration product line that is successfully deployed to support mission critical applications at a major bank and, following a merger, proved instrumental in migrating applications to systems of record of the combined bank.
- Rigorous software engineering practice and distributed, object-oriented, transaction processing technology in the financial and services industries.

The MDA approach makes FSG highly adaptive to changes in the Community Process and greatly simplifies support for heterogeneous technology environments. Financial Systems Architects is currently working within the Financial Domain Task Force on preparing and issuing an RFP standardizing the FSG interface as one of the first MDA based technologies.