Case Study: **IBM WebSphere II Connectors**

Client: IBM
Project title: Connectors for WebSphere® Information Integrator (WebSphere II)
Project domain: Enterprise Application Integration
Business domain: Software & Technology

* Background

StarSoft works for IBM on WebSphere® Information Integrator (WebSphere II) Content Edition. Our collaboration started in May 2004. WebSphere® Information Integrator (II) Content Edition allows applications to access and work with a broad range of unstructured information sources, provides the capability to integrate enterprise applications with relevant content, such as documents, images, audio, video, and other unstructured and semi-structured information stored in multiple, disparate repositories throughout the enterprise. WebSphere® Information Integrator (II) Content Edition allows access to many different content repositories and workflow systems through a single, Java™-based, bi-directional interface. This interface makes it easy for application developers to integrate those sources into new or existing enterprise applications.

* Project scope

StarSoft's assignment includes development of new connectors for WebSphere II Content Edition, as well as testing and support for previously developed connectors. This product must translate the requests made to access services (such as searching or capturing content) to the vendor-specific APIs of content repositories and workflow engines. This translation is done by connectors, which also normalize the results of those operations and return the data to Access Services. Connectors are normally hosted within a container stateful session EJB. As with Access Services, the J2EE application server provides services to the connector for clustering to support load balancing, high availability, and distributed network communications to support various network topologies and geographic scenarios. In the course of the collaboration, StarSoft has covered the following:

- Development of Hummingbird connector
- Development of Doorways connector
- Internalization testing for Russian and Japanese languages
- Upgrade of Domino Doc connector to new version
- Upgrade of Doorways connector to new version
- Bug fixing for Lotus 5 connector
- Bug fixing for Lotus 6 connector
- Bug fixing for Lotus MQ Series connector
- Bug fixing for Domino.Doc connector

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* Product requirements

At the heart of the product is a single, bidirectional interface that enables multiple disparate content sources to look and act as one system. It provides the ability to

- deliver access to underlying content and workflow systems
- expose their full two-way function and unique capabilities
- enable users to organize and work with content assets and workflow items as if managed in one system
- adhere to the security of those systems, and
- add federation services such as metadata mapping, federated search, and single sign-on.

The product also features a uniform superset API which remove the need to code to multiple APIs from different vendors, and real-time content views of content and workflow accessed in place remove the need to access each repository individually. Out of the box connectors to leading content repositories quickly unify a broad range of content sources and workflow systems without the cost, complexity and risk of custom programming efforts. The toolkit lets users develop, configure, and deploy content connectors to additional commercial and proprietary repositories.

* Technologies

Duration: May 2004 – present time
Platforms: MS Windows Family
Language: Java
Technologies: J2EE, EJB, RMI, BEA Weblogic, IBM WebSphere

* Project methodology

Because of the particular demands for this project, IBM needed a vendor who could provide a team of engineers with deep analytical ability along with top-notch research skills and a thorough understanding of the specifics of EAI development. The StarSoft team involved in the project provides just such capabilities. The team is managed in an efficient and flexible manner, accommodating new tasks coming from IBM.

StarSoft provides IBM with the development/maintenance team that consists of a project manager, 4 developers and 1 test engineer. The central challenge lies in the fact that for a new connector to be developed, numerous research tasks have to be successfully solved by StarSoft. For every new connector, the structure and organization of the corresponding repository has to be thoroughly understood first, its function and API studied in detail. Only then can implementation begin to take place.

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StarSoft Development Labs, Inc.

* Project summary

Duration: 1 year
Team size: 6
Pricing: T&M

* About StarSoft

StarSoft Development Labs, Inc. is presently one of the fastest growing software outsourcing service providers in Russia and Eastern Europe. Headquartered in Cambridge, Massachusetts, USA, StarSoft maintains a software development center in St. Petersburg, Russia. StarSoft specializes in implementation and maintenance of information systems, offering particular expertise in database development and migration of legacy systems to web-based environments. StarSoft offers its customers a wide range of engagement models including both project lifecycle services and dedicated Offshore Development Centers (ODC). StarSoft's former and current clients include CSC, T-Mobile, Macromedia, IBM, Dynix, Fellowes, Imagine Software, Contex, Tupperware, and others.

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