

CedarCrestone Integrates Oracle Fusion Middleware Resulting in an Automated Filing System for the Idaho Secretary of State Office

BACKGROUND

The processes currently in place within the Idaho Secretary of State (SOS) Offices are largely centered on paper documents. The workflows involved require a significant amount of moving physical documents from one location to another, both within and between divisions. Although documents are often scanned into electronic form, frequently this does not happen until late in the process. A significant amount of effort is spent by SOS staff to manually enter the same data into multiple systems. This task involves both the transcription of data from paper documents and verification of that data, which often includes a second transcription. The current volume of corporate annual report filing, just one of several SOS functions, involves approximately 10,000 reports per month.

SOLUTION GOALS

The primary goals of the new automated document filing system are:

- Reduce the labor cost and data entry errors inherent to handling paper documents
- Improve the visibility into the filing process
- Significantly boost the productivity of the existing staff
- Increase process uniformity between divisions

SOLUTION

The strategy is to convert paper documents to electronic images as soon as they are retrieved. This eliminates the possibility that documents will be lost or damaged during processing. This also enables OCR scanning of document data, thereby eliminating most manual transcription requirements. The OCR stage also enables each document type to be routed by BPEL Process Manager to the appropriate work list. Automatic escalation of work list items is utilized to ensure that no document is lost during the process. As the digital representation of each document is verified by the SOS staff, notification emails are generated and sent to the appropriate staff as necessary.

The SOS enterprise solution is divided into the following subsystems:

- **Enterprise Resources** – consist of servers common to all processes, such as identity management, databases and file servers
- **Common Services** – consist of BPEL processes that provide functionality common to all SOS business processes, such as document receiving and imaging, messaging, notification and security



Industry	Public Sector
Stack	<ul style="list-style-type: none">• Oracle iAS 10.1.3.3• BPEL Process Manager 10.1.3.3.1• JDeveloper 10.1.3.3
Integration Components	Oracle BPEL PM 10.1.3.3.1
Endpoints	<ul style="list-style-type: none">• Email• Fax• Teleforms OCR Server
Oracle BPEL PM Deployment	Single Server for BPEL PM configured with SQL Server dehydration



- **Business Unit Services** – consist of BPEL services that provide functionality for a specific SOS business process, such as annual business report filings
- **Service Client Application** – a modular desktop application that addresses the crosscutting concerns of each business process, such as access control, validation, logging, caching and configuration

SOLUTION COMPLEXITY

CedarCrestone (E2E at the time) was chosen to partner in this solutions after being highly recommended. The SOS enterprise solution is comprised of several BPEL processes and utilizes BPEL Process Manager and Human Workflow. The BPEL processes interface with external web services, file servers, multiple database technologies and desktop applications.

The BPEL processes are run on a Quad-CPU server with 8GB of RAM. Transaction volume is limited only by the document scanning and OCR capabilities. The volume of Annual Reports is approximately 10,000/month. Annual reports are the first reports to be automated with additional documents to follow.

Challenges encountered:

- Automating the OCR process to identify documents that need visual verification and route them to the appropriate work list
- Correlating filing fee payments with associated documents without requiring them to be scanned in succession
- Configuring BPEL Process Manager to use SQL Server 2005 as the dehydration store

SOLUTIONS RESULTS

Short-term Results:

- Created a framework of common services that will be utilized by future business unit services
- Created a modular desktop application framework to consume both common and business unit services

- Combination of reusable services and desktop components will significantly increase the efficiency of the existing development team

Long-term Results:

- Check deposits will be converted to an electronic deposit file that will be automatically generated at the close of each business day and electronically delivered to the bank.
- Internal resources will be decoupled from external consumers (public site). This will eliminate periodic production downtime caused by resource overloads
- Replacing process-specific legacy desktop applications with a single modular application will reduce development and maintenance costs
- Operating costs will be significantly reduced as manual processes are replaced by automated business unit services

WHY ORACLE?

The Oracle BPEL Process Manager was chosen as the core for this project because of the ability to interoperate with our current systems and the powerful human workflow functionality. The combination of the various adapters and the support for open standards facilitated the easy integration with our existing SOS enterprise systems such as Active Directory, SQL Server 2005, and Sybase.

The developers at the SOS are primarily skilled in .NET and Sybase development so the learning curve of the new tool had to be small. The BPEL designed in JDeveloper enabled the SOS developers with little SOA experience to quickly develop and deploy Web Services.

Several different vendors were considered to provide a human workflow solution. The out-of-the-box human workflow functionality provided by the BPEL Process Manager is very powerful and provided a head start on the goals of the new architecture.

The Idaho Secretary Of State Information Services Division developers have been using only Sybase products for years. No one here had any experience with SOA before it was decided to update our in-house client applications, online applications and databases to technologies other than those of Sybase.

We were introduced to the Oracle BPEL Process Manager using JDeveloper as an IDE. The IDE is excellent. With just a small amount of training in the use of the IDE we found that we really didn't need to know all the background details of creating SOA services. The GUI made the process quite simple. After a short time of trial-and-error experience our developer's caught on quite well to the process. Moreover, the services created run quickly and efficiently in practice. We were also happily surprised at how easy it was to use the services with non-Oracle products; e.g. MS SQLServer 2005 databases, Sybase databases and MS Visual Studio 2008 C# applications.

The JDeveloper IDE is also a great tool for developing XML Schema, XSL Stylesheets and other XML related documents, as well as Java-based code. Overall, we are very pleased with the product.

Hal Barker
Senior Developer

CedarCrestone Profile

Type: System Integrator (SI)

Location: Atlanta, GA

Public/Private: Private

Size: 600 employees

Geography: North America

Key Verticals:

- Commercial
- Higher Education
- Public Sector

Expertise:

- Oracle E-Business Suite
- Oracle Fusion Middleware
- Oracle Database
- Oracle Portal
- Oracle Training
- Oracle Database
- PeopleSoft

CedarCrestone: Turning Software into Solutions

Analyze • Strategize • Design • Implement • Deploy • Upgrade • Manage • Optimize • Host

contact@CedarCrestone.com
866.827.3786

About CedarCrestone

CedarCrestone delivers real client success by providing consulting, technology, and managed services for the deployment, management, and optimization of Oracle applications and technology.