

Case Study – Enterprise Document Library



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This paper attempts to showcase BitWise capabilities of developing an enterprise class document library on SharePoint (MOSS 2007) Platform. This document library was developed for an insurance company by BitWise, the requirements and implementation details of which are elaborated in the ensuing sections.

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10/16/2009

Requirements Enterprise Document Library

- Develop a one stop solution for document management and version control for all legal documents.
- Segregation and categorization of documents on the basis of multiple search and business criteria.
- Processing of scanned documents.
- Approval, Rejection and Review workflows.
- Integration with Active Directory to manage approval hierarchy.
- Mail alerts on modification of documents as well as pending approvals.
- Ability to search on user defined criteria as well as default criteria.
- Create multiple views to sort and group documents on different business needs filtered by access right assignments.
- Ability to lock and unlock the documents by user.
- Ability to force unlock document by administrator.
- Security through groups to restrict access on multiple document libraries and folders as well as on individual documents.
- Publish the read-only “final” version of the document to the public site.
- Customize site menu and left side navigation.
- Track usage of the site.



The implementation Solution

The document library solution was developed using MOSS 2007, SharePoint Object Model and custom developed web-services.

The site was composed of a root level site with multiple sub-webs per department under a SharePoint portal. The document library catered to multiple departments and was required to be secure with specific privilege requirements for the multiple departments using this library.

The Security and privileges were implemented using a custom user interface on the root site managing the permissions for all the nested sub-webs. The navigation was customized using web-parts developed using “Infragestics” menu control (a third part control provider) and left navigation was implemented using accordion menu web-part using JQuery.

The sub-webs catering to departments had 3 document libraries:

1. Active Documents
2. Archived Documents
3. Published Documents

The “Active Documents” had all the intermediate versions in “Draft” mode. Each modification to document was notified to the owner of the document through SharePoint alerts. This document library had versioning implemented with multiple custom access right assignments which were assigned by customizing the permission sets of default SharePoint site. The SharePoint groups based on the business roles were assigned such custom permissions set. This was an important feature for controlling access to various features of document library such as editing custom content types, managing templates etc.

Users were could check out and lock the document and the document library owner had an ability to force unlock such documents. The document library owner had a view to see all the locked documents and ability to force unlock multiple documents; this was achieved using SharePoint administrative view.



The documents passed through a complex approval workflow on completion of which the document would be finalized. The chain of approver and reviewers was controlled through data items of Active directory. Different states in the approval workflow were tracked in a site level calendar helping the user to manage the pending items.

The finalized (document that has completed the approval workflow) document was moved to the “Published Documents”. The specific requirement to upload the document to an ASP.Net public site was achieved through a custom built web-service. Another specific need was that a finalized document on rare occasions could undergo further changes, in such a scenario “Published Documents” would be replaced with a newer version and the older version would be moved to “Archived Documents” by a workflow. The document libraries were integrated with custom columns capturing information to provide better views and better search options. Various set of administrative and reporting views were built using creation and modification information as well as various other specified business entities (custom columns) with ability to filter and group them.

Site usage and auditing was performed using SharePoint built-in site usage metrics feature. The document libraries were made search friendly by configuring the document libraries and the Microsoft Search Server 2008 full text search and indexing feature.

The site supported scanned documents which were dumped in a document library on the root site through batch jobs. The batch jobs consumed a custom web service deployed under SharePoint to upload such documents. The web-service handled all document library based functions through web-methods which is one of the missing functionalities of web-services exposed by SharePoint. Once uploaded, the documents were processed using “Leadtools” OCR SDK for .Net 2.0 (3rd party tool). The content of these documents was made available in word document formats. These were saved to appropriate document library under correct department using a scheduled job to be activated by the administrator. This gave the administrator an ability to modify categories and departments before the scanned documents were processed.

An important feature to compare the Word document was provided using the Microsoft OpenXML SDK 1.0.



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Our consistent track record of meeting and exceeding customer expectations is the result of our customer-centric philosophy. This philosophy establishes a value proposition focused on long-term relationships and delivery of value added services.



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