Content Solutions from Paper to Mobile

A white paper from Zia Consulting

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ZIA
content people

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Executive Summary

While most organizations make substantial use of electronic media, particularly internally, much of their interaction with external parties is still done on paper. Financial documents, contracts and other agreements, invoices, identification documentsand more are often still mailed or presented in person to the business.

Converting these documents into electronic form and managing them can pose a number of challenges. It's not as simple as going to a copier and scanning in a paper document. Many content-centric business processes require that metadata information be extracted from a document and integrated with other enterprise systems, such as ERP or CRM. With some paper documents including hand written notes, digitizing and integrating paper documents into electronic business process is no easy task.

With the rise of mobile computing devices, companies are facing an additional challenge – makingcontent available on any mobile device. Users want access to their personal and business information wherever they are from their mobile device. They are demanding "Content Anywhere" solutions.

And of course, all of this needs to happen using a modern open standards based architecture that is "future proof", thatleverages open source technologies to maximize ROI, and is available with a complete suite of deployment options from private cloud to public clouds or a hybrid combination of them.

This white paper demonstrates how combining intelligent document capture, enterprise content management and enterprise mobility applications provides organizations and users with business processes that span paper, ECM and mobile platforms, enabling a higher level of productivity and availability of business information than was ever possible previously.

The Components

Paper – Intelligent Document Capture

Intelligent document capture solutions make converting paper documents easy by automatically classifying, separating, sorting and extracting data from documents in paper, fax, email and electronic formats.These systems can be trained to recognize different document types for a high rate of accuracy. Using an intelligent document capture solution combined with a scanner or multifunctional printer ensures that the critical information within the document makes it into your organization's business process.

Intelligent Document Capture refers to a series of processes:

- Page Processing – OCR, image processing and comparison, page classification, barcode processing;
- Document Type Classification – Fuzzy logic matching technology that uses the outputs of page processing to determine the type of document without separator sheets or document type barcodes;
- Document Review – "Human-in-the-loop" verification of classification, with the ability to correct automated results or re-run automated processes with additional data;
- Extraction – Data automatically extracted from barcodes and OCR enhanced with regular expressions, and the assignment of confidence levels to the results;
- Data Validation – Another "human-in-the-loop" area , using the confidence levels to aid the user in prioritizing content that needs human intelligence to continue; and
- Export – Once the data validation is passed, content and the extracted metadata is stored in the Content Management system.

An emerging leader in intelligent document capture is Ephesoft. It is easy to deploy; easy to useand does not lock organizations into a proprietary stack. As an open source and web-based technology, Ephesoft offersa high quality software at a much lower cost than traditional licensed commercial software alternatives.

The benefits of Ephesoft Intelligent Document Capture are:

- **Cost Reductions**
  - Significant data entry savings through less keying;
  - Reduced integration costs through speedy deployment (CMIS supports leading CRM and ERP solutions);
  - IT infrastructure savings due to easy rollout (only a browser is needed on clients' PCs);
  - Easy to adopt with training available commercially or free video-based training
  - Subscription pricing rather than substantial license fees so ROI can be much faster than traditional capture systems.

- **Process Improvements**
  - Auditability by ensuring that the capture process is always performed the same with the same results;
  - Greater compliance with process that is measurable and reportable;
  - Reduced error ratesby minimizing human error;

- **Productivity Benefits**
  - Higher productivity through automation yields higher returns for the company;
  - Customer satisfaction increases since paperwork is processed faster and more accurately;
  - Business workflow starts sooner, improving the decision-making processes.
- **Platform Benefits**
  - Modern rather than legacy technology for browser-based capture solution
  - "Cloud-ready" – available to be deployed on a private cloud or on public clouds includingAmazon EC2 and pending release onMicrosoft Azure

Content Management – The Hub

With contentin a digitized form, either through use of an intelligent document capture process or since they were originally created that way, organizations need a place to store these documents or other contentso that they can be accessed and shared.

Where and how you store documents are a critical and an often overlooked aspect of an enterprise's infrastructure. Document storage serves as the hub for many mission-critical operations. While there are many different approaches and products to store documents, your choices boil down to storing documents either in an *unmanaged, semi-managed* or*managed* environment.

Unmanaged storage such as the disk drive of a user's computer or a shared network drive is extremely common and easy for users and administrators to set up and begin using immediately. With this approach, document sharing and collaboration between users is often simplydone by sending email attachments and merging edits into a single document. While many companies use an unmanaged approach, it is inefficient and hard to scale for large numbers of documents and users.

With the advent of cloud based computing, companies such as Google have made new and compelling tools available which allow enterprises to store their documents in a semi-managed environment. For example, Google Docs allows users to store documents in a cloud based environment and provides excellent advantages in terms of facilitating collaboration, even allowing several users to view and edit the same document simultaneously. However, there are also inherent drawbacks to a semi-managed environment. Companies no longer have primary control of the intellectual property and this scenario can be difficult to scale.

Managed document storage environments provide a best solution and incorporate the ease-of-use of an unmanaged environment with the collaboration tools available in the semi-managed environment. In this type of environment, companies have significantly expanded document control, manipulation, and collaboration capabilities. Enterprise content management (ECM) systems are considered managed storage environments and have historically been an expensive proposition to procure and maintain. However, open source ECM systems, such as Alfresco, have dropped the cost of ECM dramatically while still providing robust functionality and extensibility.

There are several benefits to using a managed document storage system such as Alfresco that are not provided by unmanaged or semi-managed environments. These include:

- **Searchability** – When a document is loaded into Alfresco, the text content of the document is automatically scanned and indexed by a software manager known as a full text indexer. This manager allows you to easily find your content at a later time by searching based on words or phrases contained in your file. In addition, you can also associate your own data elements to a document, known as metadata, which can also be used to search for and manipulate a file.
- **Security** – Alfresco provides the ability to set up and maintain secure access to your document so that only the appropriate users can access, view and change a document. Users can be assigned to groups and roles to provide additional functionality.
- **Ease of Use** – Alfresco can be configured to look like a shared drive, significantly lowering the barriers to adoption. Alfresco also provides out of the box capabilities to allow users to leverage Google Docs as a collaboration environment.

Content Management Considerations

Content needs and user groups will evolve over time and it is important to consider how a managed content environment will adapt to future conditions. Content environments need to be based on modern architectures in order to meet a company's changing needs. For example, Alfresco is constructed as a modern content management platform based on open standards. Alfresco exposes the core content repository functionality through a set of RESTful web services that can be easily extended by a scriptable interface in the content server. This makes it an ideal platform for long-term content needs.

Using a managed document approach, as provided with ECM systems, allows organizations to automate and manage a document through a business process. Known as business process management (BPM), an enterprise can define a set of operations or workflows to be performed on a document, as well as define a set of users who can view/edit the document before it is published. Process definitions are created by business analysts that outline simple or complex paths for a document through an organization. This includes highlighting what should happen if a document needs to be revised or is held up in a user's queue or needs to be escalated for processing. Workflow is built in alerting users when a document is ready for their review.

Alfresco provides a modern, extensible BPM engine known as Activiti, which can be used to hook into other business processes and systems through Java based customizations.

The emergence of cloud-based solutions means that enterprises have new options when it comes to ECM systems and managed environments. A company may wish to outsource the management of its ECM platform to a third party to reduce operating costs, and provide additional capabilities for distributed workers to collaborate. Or a company may want to provide a cloud-based content repository where employees can share content with partners, customers or other outside collaborators.

Alfresco's cloud strategy allows enterprises to take advantage of both of these options by providing both a managed cloud-based offering as well as a cloud-based shared content store. The latter allows an enterprise to specify which documents should be shared to a cloud store, and is capable of automatically managing both inbound and outbound synchronization of documents shared with external entities.

ECM solutions like Alfresco also help manage the full lifecycle of a document from ingestion, review/approval, storage and archiving. Even when a document is no longer being actively used by a company, there may be requirements to store it a specified period of time based on legal or governance policies. To address this, Alfresco offers an open source Records Management module that provides the ability to transfer documents from an Alfresco managed content repository to a long term storage and disposition repository. It can also attach retention policies around documents.

Your content – whether it enters as paper or digitally and wherever it is stored – also needs to be used by business applications such as ERP or CRM systems. Alfresco ECM can be integrated directly or via an Open Source ESB such as Mulesoft to technologies such as Salesforce.com, Oracle Financials, or SAP.

Paper to ECM

Combining intelligent document capture with a managed document storage approach ensures that enterprises have the ability to significantly reduce paper usage throughout an organization while providing access to the information contained on that paper in an effective and efficient manner. Organizations can establish an "Information Hub" that promotes the efficient management of documents. The Alfresco ECM system is the ideal platform providing customers robust features and management options. Enterprise have the ability to choose between on-premise or cloud based storage options, as well as the option to easily share content with partner companies through a cloud based collaboration area.

With Alfresco, users can interoperate with the managed storage server without changing any of their current operating paradigms, and content can be directly ingested from intelligent document capture applications such as Ephesoft. Documents can be easily found, managed, and routed using the built in capabilities from the content repository, and applications such as Microsoft Office and Google Docs can be directly integrated. Finally, an enterprise can use the built in web services as a basis to build a highly extensible, highly functional information platform for the full enterprise.

Enterprise Mobility – Content Anywhere

Mobile technology and applications are transforming the way people work and interact with content. Today, workers want to receive business content the same way they view personal content – via their mobile device. What makes mobile so appealing is how workers can execute their workload on mobile devices anywhere, anytime. Workers are no longer tied to a desktop computer. With workers demanding the same flexibility with their business content as they do with personal information, IT departments are faced with the challenge of supporting mobile devices and more recently extending business applications and processes to them.   This includes a growing set of requirements for mobile workflow, mobile application customization / branding, and role-based applications.

While there are growing number of applications that provide productivity tools related to content, the primary focus for enterprise IT is providing mobile access to the ECM repository itself in a secure manner. Using the managed document storage concept with the Alfresco ECM system, below are three mobile applications that customers can implement today to "go mobile" – each offering a different approach to meet the needs of different organizations:

Fresh Docs

Zia Consulting's Fresh Docs mobile application allows users to access ECM systems from any iPhone, iPad or Android device. Available free from the Apple iTunes Store or the Android Marketplace, or available as a customized solution for enterprise IT departments under an OEM license Fresh Docs lets users browse, search, retrieve, open and email documents from any ECM system on a mobile phone or tablet device. .

Fresh Docs leverages the Content Management Interoperability Services (CMIS) specification to securely communicate with leading ECM systems including Alfresco, IBM Filenet P8, Microsoft SharePoint, Nuxeo and OpenText. Users can configure Fresh Docs to connect to a repository using wireless technology built into the device. The connection supplies an authenticated user to provide a custom view of the ECM system.

Key Features
- iOS and Android native applications for accessing ECM systems;
- Connect to any CMIS repository supporting the CMIS AtomPub protocol binding;
- Authenticate to an ECM repository;
- Browse the ECM content that the users can access;
- Access content stored in the repository, including Microsoft Office and Adobe PDF documents;
- View content metadata directly in the application;
- Search the ECM system from a mobile device;
- Identify favorite content for easy access later;
- Open content in other applications to access robust productivity applications available on the mobile device;
- E-Mail content using the device's native email support

For the Enterprise, the Fresh Docs platform provides the ideal "jump start" to a CMIS-compatible mobile application for organizations requiring customization and specific enterprise-class functionality.

Alfresco Mobile

Following the success of Fresh Docs, Alfresco called on Zia to help develop the Alfresco Mobile iOS app. Alfresco Mobile connects natively to Alfresco Enterprise, Alfresco Team, and Alfresco Cloud and provides access to your corporate documents on the go.

With Alfresco Mobile, you can:
- Easily navigate your sites and folders in Alfresco;
- Quickly download and view documents on your iPhone or iPad (Microsoft Office Documents, PDFs, videos, images and more);
- Capture and upload of video and audio recordings;
- Upload documents;
- Add comments to a document and view comments from others;
- Comments are automatically synced to the Alfresco repository;
- Open documents in other apps for editing;
- Open documents in Alfresco Mobile from apps such as Mail App, Office HD or DocsToGo;
- Save your favorite documents on your iPhone or iPad for offline viewing;
- Easily email documents right from the app;
- Capture, tag, and upload documents and multimedia from your iPhone or iPad; and
- View a content activity feed with direct link to updated documents.

MobileWorkdesk

For many organizations, the robust requirements for Enterprise Mobility mirror those on the desktop. To address this Transactional Content Management use case, Zia partnered with WeWebU to bring MobileWorkdesk to the market. MobileWorkdesk is based on WeWebU's OpenWorkDesk, a suite of applicationswith cutting-edge usability for retrieval, eFile management and business process management. MobileWorkdesk offers standard document management functions like browsing, searching and uploading of documents. It works with any CMIS-compliant ECM repository, and adds a unique server component that embraces the comprehensive business logic and productivity enhancing features of OpenWorkdesk.

MobileWorkdesk allows users to interact with personalized content like individual inboxes and tailored views, user-related favorites and stored context-specific searches. MobileWorkdesk even allows users to participate in workflows and approval processes from a mobile device and to edit and annotate documents either directly online or for a later check-in using the offline functionality.

Paper to Mobile Conclusion

You have a content everywhere problem. Your content comes into your mailroom as paper, fax or via email– and then is distributed across your Enterprise, stored in corporate applications from ERP to CRM to ECM.   The problem is making all that content available to your knowledge workers where and when they need it. You need a content anywhere solution.

Using Alfresco ECM as an "Information Hub",Zia Consulting provides content management solutions from paper to mobile for intelligent document capture, enterprise integration and enterprise mobility, implemented either on premise or in a public or private cloud.

Using best-of-breed open source technologies such as Alfresco, Ephesoft, and WeWebU, Zia provides complete content management solutions with enterprise integration capabilities to align your modern technology architecture with legacy and corporate applications while delivering that content with a choice of front-ends which meet the needs of your organization. And as the world's leader in mobile content management development, Zia can also deliver enterprise-class mobility solutions, making your content available on the go, wherever and whenever you need it.

Zia Consulting is a leading provider of enterprise business solutions for content management from paper to mobile.

Zia Consulting's Fresh Products and Mobile Applications for ECM enables users to create, store, share, and find content across the enterprise and on the go. Zia Consulting has worked with both the public and private sector to provide end to end business solutions for Procurement, Sales Automation, Contract and Records Management, eDiscovery, Knowledge and Business Process Management, Project and Expense Management, to name a few.

Zia Consulting, Content anywhere, Solutions here.

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