

The Role of Fixed Content Management in Business and Process Modernization

An Executive Overview
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iForceSM
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Chapter 1

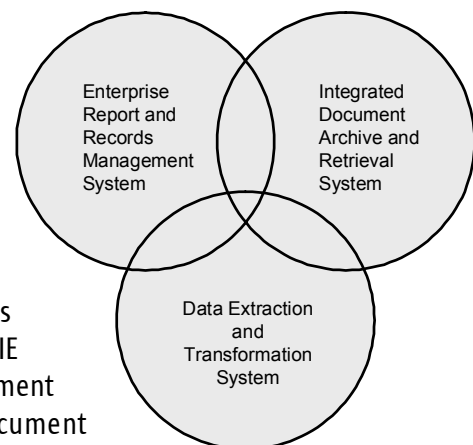
Executive Summary

Knowledge workers today are literally snowed under with computer and paper-based information. The problem is universal because most organizations support a broad range of production applications while power-users create and distribute even more information with spreadsheet, word processing, and other desktop productivity tools. It is the rare occasion when the information needed to perform a particular task is limited to a few applications or sources. Meanwhile, customers, vendors, regulators, and other external partners contribute even more information. And then there is e-mail. This blizzard of information is important because it pertains to processes and communications to which your organization is held accountable. This is fixed content.

Fixed content is everywhere. The notion of fixed content is certainly not new. Fixed content is read-only, static data that represents an information snap-shot at a given point in time. Across every industry the term “fixed content” applies to business intelligence, reports, records, forms, audit trails, documents and files that, by procedural design, are published once and only changed through an auditable process that creates an update to the original. Accounting, legal, and management professionals demand fixed content for audits, evidence, operations, tax and regulatory purposes. The prudent management of fixed content is recognized as a trustworthy, reliable, and economical way to maintain and guard any organization’s information assets.

Traditional methods of distribution and archive can transform this mass of information into an unmanageable blizzard. E-mail attachments compound the problem and create security and disk management issues. Vital information often resides exclusively on desktops, notebooks and network servers, beyond an organization’s optimum degree of control.

OCIE® Fixed Content Information Management from Donnell Systems will resolve these issues and help conquer the information blizzard. OCIE combines a disciplined and enforceable approach to records management with the power of Enterprise Report Management, Integrated Document Archive and Retrieval, *and* Data Extraction and Transformation.



1. OCIE Fixed Content Information Management

Chapter 2

Enterprise Report and Records Management

OCIE Fixed Content Information Management enforces security, privacy, and retention directives by automating the capture, cataloging, and management of reports, records, documents, and native files from any enterprise source. By reducing or eliminating opportunities for error, OCIE can help improve the integrity of data-intensive business processes.

Organizations throughout the United States depend on OCIE to archive and administer intellectual assets produced by a wide range of technologies and software applications including mainframe generated print-line reports, PDF and PCL print streams, images from scanners and lockbox services, documents, reports, and other publications.

Chapter 3

Integrated Document Archive & Retrieval Systems

OCIE Fixed Content Information Management facilitates batch processing and loading for documents and image sets that accumulate internally and for those produced externally and transmitted by service bureaus and lockboxes. In addition (provided permissions are enabled and authorized by system administration), OCIE permits approved users to load fixed content to the system manually from anywhere in the enterprise so your organization can maximize resources whenever and wherever available.

Further, OCIE is also designed to archive and administer native files (files which are neither print-stream reports nor images). OCIE will capture and store a read-only instance of any application file type (e.g. ACROBAT.pdf, AUTOCAD.dwg, EXCEL.xls, NOTEPAD.txt, PKZIP.zip, WORD.doc) and distribute the file in a secure manner to authorized users for presentation in the specified application.

Chapter 4

Data Extraction and Transformation System

OCIE Fixed Content Information Management includes tools to automate manual processes and transform your business. OCIE provides tremendous assistance to any organization that plans to migrate to ERP – before, during, and after the move. OCIE can capture historical information from legacy applications and serve as a repository, distribution, and viewing mechanism -- allowing you to dump legacy data to a common tool for archival and future processing. OCIE is designed to extract data from archived information and accelerate the backfill of data fields in new systems. ERP transitions go more smoothly. Legacy systems can be decommissioned faster. With OCIE as the independent archival tool on the back end of an ERP application you can migrate freely to any platform in the future while preserving leverage for future planning.

OCIE can help you achieve a wide range of automation goals and avert the need for custom development on legacy systems. OCIE is also effective in helping to attain corporate-wide standardization and enforce uniform compliance with corporate policies and regulatory guidelines. OCIE can help satisfy the information management requirements of Sarbanes-Oxley, HIPAA, Gramm-Leach Bliley, and the Patriot Act by creating new report subsystems and information deliverables. Lastly, OCIE can be used to mine audited legacy report outputs to feed and refresh empirical data stores used for decision support and analysis.

Chapter 5

Scanning, Imaging, and Indexing

As scanned images enter the system, OCIE can begin an automated process to enhance and prepare images for indexing and data extraction. This is a customizable process that can adapt to the specific requirements and business rules of each customer. Enhancement may include an array of pre-processing techniques including despeckling, noise reduction, deskewing, and page orientation.

Indexing methodology is another key area that differentiates OCIE from rudimentary products intended for content, document, report, or records management. OCIE's robust index structure combines permanent primary keys with supplemental, subordinate keys which permit your organization to augment the primary key structure that was applied to fixed content when it first entered the system. OCIE permits additional, supplemental keys to be applied at future points in the document lifecycle. This drastically improves research and retrieval options since this allows users to locate information in the future by key values that may not have been available when a document first entered the system.

Chapter 6

OCR Validation and Processing

OCIE employs a variety of processes including PDF capture, zonal optical character recognition, and full-text OCR to extract data from images. This information is then compared and validated against specific rules and source data which can be administered within OCIE to ensure accuracy. This data extraction and validation process dramatically reduces the amount of labor required for indexing, helps to eliminate errors, and accelerates the flow of information to users and downstream business applications. OCIE data extracts can be further processed to generate posting files and eliminate the need to manually enter data from images.

Data extracted from images and data extracted from computer-generated reports can be combined and utilized for index keys, information files to enable keyword searching, posting files, and other types of data feeds. In the event a document or page within a batch is rejected, OCIE will continue to process successful validations within the batch without impediment. Meanwhile, the system emits an e-mail notification to alert and guide appropriate personnel to deal with the exception.

Chapter 7

Forms Capture and Processing

OCIE Fixed Content Information Management captures machine printed information from paper-based forms through a specialized OCR process which includes a series of compare, validate, and error checking procedures. This OCIE exclusive, successful in high-volume production environments, produces demonstrable improvements in OCR capture accuracy.

In addition, since many organizations today continue to support legacy applications that generate and print form-style records (e.g. purchase orders, requisitions, invoices, statements), OCIE provides the most technically efficient method for enabling the online archive, retrieval, viewing, and on-demand reprinting of these documents while at the same time eliminating the need to buy and stockpile expensive, multi-part pre-printed paper forms. OCIE will manage a library of scaled vector graphic (SVG) form images which are digitally superimposed over their associated ASCII-based system outputs. This method dramatically increases the speed-to-screen for viewing and also minimizes the bandwidth required for reprints.

Chapter 8

Business and Work Process Management

The Gartner Group predicted that 75% of Global 2000 companies would have a desktop and process-focused content management implementation by 2008.¹ Donnell Systems pioneered and perfected this process-centric design in the OCIE Fixed Content Information Management solution *back in 2004*. The OCIE DocVista™ viewing client streamlines research by combining two system exclusives -- role & rules-based retrieval and Cross-reference auto-indexing.

DocVista powers a dynamic foldering capability which slices content within the OCIE repository both horizontally and vertically to organize and present a process-focused view of information relevant to a specific topic (e.g. account, patient, suspect, vendor, invoice, cost center) *and* the specific process or task at hand (e.g. claims processing, denial management, case management, loan approval). Document security reigns supreme -- OCIE restricts access at the document-level and at the user-level, allowing for organizational hierarchies as well as document hierarchies. Access is always restricted to only those users with appropriate authorization. Specific to each user profile, DocVista also organizes the appropriate array of pure-Java™ application components to provide fast, maneuverable command over computer-generated and scanned information.

DocVista drives productivity through customizable CentricViews™ -- multiple, dynamic, easy-to-navigate folder-tree views associated to a specific task or business process. DocVista also furnishes certain approved users a means to enter or edit supplemental index key values. Authorized users gain immediate access to information from disparate systems, all in one convenient interface. DocVista comes equipped with a wide selection of search, viewing, and time-saving options that adapt to the user's preference. Search processes occur on the server and dramatically reduce the time it takes to find information while minimizing network traffic.

1. *Magic Quadrant for Enterprise Content Management, 2004*, Karen Shegda, Kenneth Chin, James Lundy, Toby Bell, Debra Logan, Tom Eld, Gartner Group, October 19, 2004.

Chapter 9

OCIE Fixed Content Management and Process Modernization

OCIE Fixed Content Information Management can dramatically improve an organization's information sharing capabilities, operational performance and data security. OCIE remedies many of the inherent data processing limitations of legacy systems in a non-intrusive manner that averts the need to change legacy code.

DataDigger[®] is the OCIE report mining component that reads human understandable computer outputs. DataDigger can be programmed to automatically mine, extract, and export report data *from* any application or platform *to* any application or database for further analysis and processing.

OCIE is designed to reduce operational costs and delivered as an enterprise-wide, fixed content information management service. This solution is appropriate for application consolidation, rehosting, and mainframe conversion support for legacy application-to-ERP migrations. Essential to any modernization effort, OCIE provides tools to automate manual processes and accelerate business transformation. OCIE and DataDigger can help any organization share information from disparate systems in a secure and efficient manner, both internally and externally, without changing legacy applications or databases and without having to re-train staff.

OCIE is engineered to accommodate exponential volume, usage, and customer growth while fully observing demands for high-availability and disaster recovery. The system's unique segmented compression capability optimizes load and retrieval speed, bandwidth conservation, and data search and extraction flexibility. By offloading computer outputs from their various source systems to OCIE, you can be confident that authorized users can retrieve and view published information exactly as it appeared on the date it was generated, whether or not a source system still exists.

OCIE captures fixed content, structured and unstructured, electronic or scanned. It serves as a repository, distribution, and viewing mechanism that can extract data from archived information and hasten the backfill of specific fields in new systems. ERP transitions go more smoothly. Legacy systems can be decommissioned faster. With OCIE as the independent archival tool on the back end of an ERP application you can migrate freely to any platform in the future and preserve leverage for future planning.

Chapter 10

OCIE Manages Business Intelligence

If your organization uses or moves to Business Intelligence applications to answer more complex questions and take advantage of greater analytical sophistication, OCIE presents the best complement for information distribution and historical archive for three reasons:

- 1.) OCIE is a more cost-effective alternative for the archive and distribution of Business Objects, Cognos, SAS, and similar reports.
- 2.) OCIE snapshots are legally acceptable records, impervious to software upgrades or database overwrites. This same argument holds true for information published by mainline applications including Oracle Financials, Lawson, PeopleSoft, SAP, and others.
- 3.) The OCIE DataDigger mining and extraction component can process snapshots and transform information back into historically accurate data for further processing.

Chapter 11

The Human Layer

Behind the legacy applications that support the efforts of most organizations lie thousands of man-years of meticulous programming logic and a multiplicity of data formats coded for computing efficiency. Though this is the essence of a well-oiled system, it is pure gibberish to the typical user, an incomprehensible IT “Tower of Babel.”

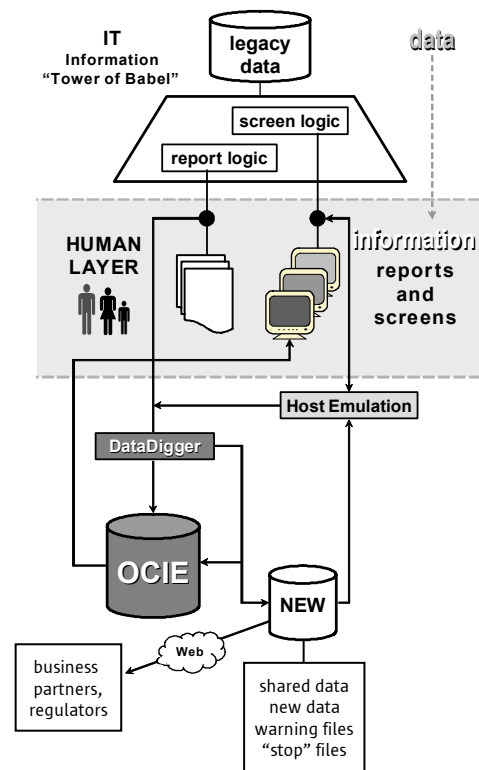
Computer outputs and screens impart the only information human beings can actually understand. Reports, documents, and screens hold information as of a point in time. Every use of a report output takes full advantage of all the man-years of logic in the existing legacy systems.

The Donnell solution focuses on INFORMATION rather than on data. We concentrate on the “Human Layer,” the crossover point where data becomes human understandable information. Thus, we are able to rapidly accelerate an effort to share data across the enterprise, remedy many legacy data processing problems, and save you money.

OCIE automatically captures outputs from any computing system, providing secure and rapid access to authorized users through the network, intranet, Internet, or VPN.

DataDigger reads human understandable reports and can mine, extract, and export report data to any application or database for analysis.

Donnell integrates host emulation software to intercept the current transaction communication before it gets to the user or before the user can update. This solution can read stop files compiled throughout your organization, then work within OCIE and DataDigger to create and post customized edits and “stops” for you, your business partners, or government authorities.



2. OCIE focuses on the “Human Layer”

Chapter 12

The Subscription Delivery Model

Donnell began delivering on its “software-as-a-service” vision as far back as 1994. OCIE was furnished to customers as an application service long before the term ASP became an industry acronym. OCIE Subscription Service (OSS) has proven to be an attractive alternative for organizations that lack the infrastructure or resources to deploy an enterprise-wide fixed content management solution. The OSS subscription fee model is ideal for customers who prefer to avoid up-front investment or technological risk. Donnell also accommodates the traditional software licensing procurement and offers hybrid combinations of professional services, software licensing, and maintenance.

Though a “Web services” and “software subscription” theme has played well to decision makers in Donnell’s target vertical markets, in reality we have experienced significant resistance to the concept of exclusively housing an organization’s information outside the client’s own datacenter. This objection has been resolved by locating the system’s physical assets (server and storage) at the customer’s site. Donnell provides a complete array of remote system administration and daily operations services. In the words of some OSS customers, Donnell Systems is a “2 ft. ASP.” The following standard services are included under an OCIE Subscription Service Agreement:

1. remote system administration
2. remote daily operations
3. software & hardware maintenance
4. system software upgrades
5. application software upgrades
6. hardware upgrades
7. disaster recovery
8. off-site storage on legal archive media

As Web services proliferate and gain acceptance, OCIE’s most vital and distinguishing characteristic may prove to be the system administration and management tools that Donnell developed in order to operate as a service business and remotely administer, from one central command center, the numerous, high-volume OCIE repositories dispersed throughout the United States. This administrative suite has functioned effectively and evolved over ten years of operation. It affords significant economies-of-scale that enable and make possible the attractively priced, software subscription, OSS business model. This delivery model can be replicated quickly by large organizations who wish to serve a dispersed community of agencies or subsidiaries, or by application providers who wish to replicate the successful OSS model.

Chapter 13

Conclusion

Many organizations still generate a substantial volume of information through systems that were not designed to accommodate network or Web-based distribution or viewing on personal computers. Some rely on legacy applications that struggle to facilitate print distribution or remote viewing. Most are simply workarounds or tools with limited functionality, restricted to certain platforms or applications. OCIE has conquered this challenge -- battle-tested and perfected in high-volume, production environments -- in both the public sector and private sector for well over a decade.

Today, OCIE is an information fusion architecture which ensures that knowledge assets are always available in the future for viewing and further processing. OCIE helps you streamline work processes and share information quickly and securely among approved employees, business partners, and customers via networks, intranets, and the Internet. OCIE accepts diverse outputs and formats including host generated reports, scanned images, PDF, PCL, rich media, native files, and more. For the organization that employs a Business Intelligence application, OCIE presents the best distribution and archive solution for three important reasons:

- 1.) OCIE is a more cost-effective alternative for the archive and distribution of Business Objects, Cognos, SAS, and similar reports.
- 2.) OCIE snapshots are legally acceptable records, impervious to software upgrades or database overwrites. This same argument holds true for information published by mainline applications including Oracle Financials, Lawson, PeopleSoft, SAP, and others.
- 3.) The OCIE DataDigger mining and extraction component can process snapshots and transform information back into historically accurate data for further processing.

OCIE can help you achieve a wide range of automation goals and avert the need for custom development on legacy systems. OCIE is also effective in helping to attain corporate-wide standardization and enforce uniform compliance with corporate policies and regulatory guidelines. OCIE can help satisfy the information management requirements of Sarbanes-Oxley, HIPAA, Gramm-Leach Bliley, and the Patriot Act by processing audited legacy outputs to create new report subsystems and to feed and refresh empirical data stores used for decision support and analysis.