Distributed Document Imaging: Maximizing Your Investment in Microsoft® Technology

Integration with SQL Server® and Access™

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Nuance Document Imaging Solutions

Introduction

Many Microsoft-focused organizations employ SQL Server or Access to support their business critical applications.

ERPs, CRMs, e-commerce applications, workflow processing engines, and other business management applications frequently employ SQL back ends and it can therefore be advantageous to tie the document imaging solution into the same databases. While native integration with an application is ideal, it is not always practical, particularly for legacy or home grown applications, and it can be advantageous to tie ad hoc document imaging solutions into a database as the next best solution.

This eCopy technology brief is one in a series of four briefs that examine the requirements for successfully integrating a distributed document imaging application into your existing Microsoft-focused IT environment. Other technology briefs in this series include:

• Active Directory
• Exchange
• SharePoint

The other three technology briefs in this series can be downloaded from our Web site.

Distributed Document Imaging in Microsoft IT Infrastructures

Distributed document imaging solutions enable knowledge workers to convert paper documents into electronic files.

As a result, these solutions offer significant benefits, including:

• Making paper-based information available throughout the organization
• Speeding up the processing of paper documents while simultaneously reducing the associated costs
• Enabling administrators to apply policies for compliance with records management and security regulations
• Safeguarding paper documents through electronic backup to offsite facilities

To achieve these benefits, the imaging application must be easy to use and must integrate with the applications people already use on a daily basis for communication, collaboration, and document storage. Users must be able to walk up to any scanning device and store, distribute, and share paper documents the same way they handle electronic files at their desktop – by browsing the network, storing files to pre-configured locations, selecting recipients from address lists, and indexing documents for quick retrieval.

For organizations with Microsoft-focused IT infrastructures, this means integrating with the Microsoft technologies and applications already in place, such as Active Directory®, Exchange, SharePoint®, and SQL Server®-based business management applications.

Dynamic integration with back-end servers (domain controllers, Exchange servers, SharePoint servers, etc.) through programmed interfaces ensures that the user interface reflects the latest changes to the underlying applications, directories, and site structures. It also eliminates the need for preconfigured scanning cover sheets that some imaging solutions require. The application interfaces must be sophisticated enough to handle the infinite variety of complex network environments involving multiple domains, multiple forests, outsourced IT management, and internet-hosted services.

Data validation and document indexing

Document indexing is a potentially error-prone task that can result in lost data, hours wasted searching for documents, and costly workflow processing exceptions due to improperly indexed document images.

To minimize errors, administrators can provide lists of permitted values from which to choose. Hard-coded lists may be appropriate when the permitted values are fixed (for example, state abbreviations), but often these lists are modified on a regular basis (for example, vendor names).

Instead of using free text fields or hard-coding index values to eliminate indexing errors, the document imaging solution must provide easy to configure tools to query SQL look up tables and present them to the user at the point of capture. For example, instead of requiring users to type a vendor name, you can query the vendor management database and obtain the current list of approved vendors.

SQL integration frequently requires custom programming, but for simple integration with a document imaging application, a custom-coded solution is superfluous. Ideally, IT administrators can achieve basic integration through a simple wizard-driven interface that lets them connect to a data source and select the appropriate columns. When different values are stored in separate tables (for example, vendor names in one table, PO numbers in another table), it must be possible to map each metadata field to a different table.
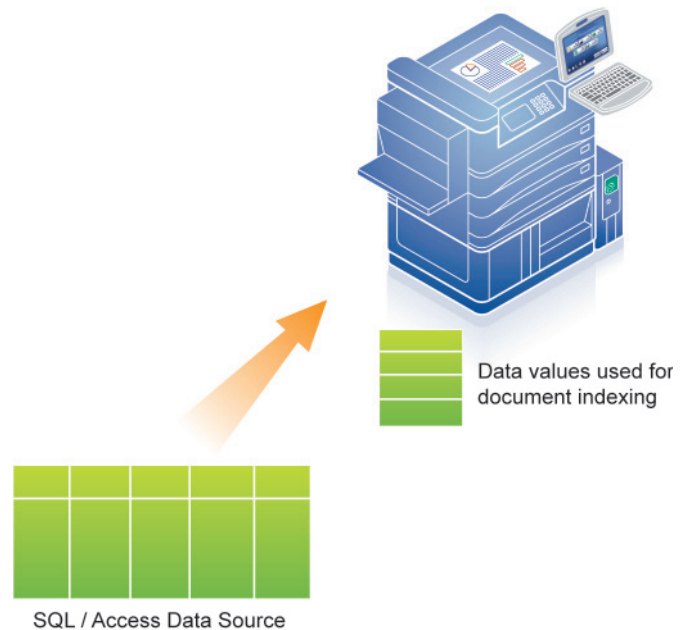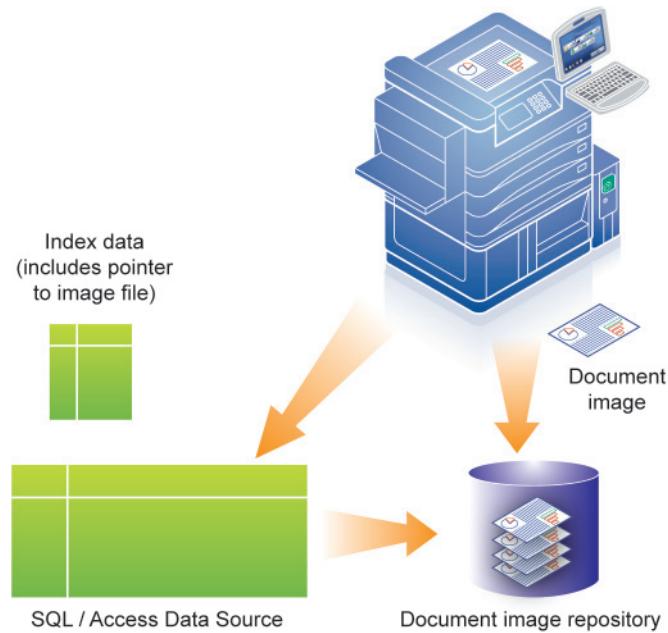

Data values used for document indexing

SQL / Access Data Source

The document imaging solution can connect to a database and create the permitted values list dynamically.

Document storage

Increasingly, relational databases that are at the core of business systems are being asked to include unstructured data in the form of documents, images, and other multimedia formats.

Whether scanned document images ultimately reside in a file store or in a database, a distributed document imaging system must be able to easily and flexibly meet the diverse integration needs of an organization.

The document imaging solution needs to provide a simple non-programmed interface that enables the administrator to specify the document storage location and the data store. The administrator can then select from the available columns in the selected table. Once the file information is in the data store, any database client application or workflow management tool can use the metadata to identify the document and the file pointer to retrieve it.

The document imaging solution can connect to a database and create the permitted values list dynamically.

Summary

By connecting to existing SQL or Access databases using wizard-driven interfaces, it's possible to integrate document indexing and storage with your existing database applications, creating basic electronic workflows without any programming.

For example, you could scan an order form, index the file using a PO number from your accounting system, and then send the file pointer and metadata to your ERP system for processing.

Considerations when selecting a distributed imaging solution:

• Can the solution interface with existing SQL/Access databases without need for programming?
• Can it read data from the database to create dynamic pick-lists during document indexing?
• Can it store file pointers and metadata values to the database?

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