

BIOGRAPHICAL INFORMATION

Bob Deaver
Product Manager
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Specific Responsibilities

Joined UCLID in 2001. Responsible for training, customer education and technical support.

Past Experience

Over 8 years experience with software and training.

Educational Information

Novell 5.0 certification

Professional Memberships

GITA

National Association of County Recorders, Election Officials and Clerks

Wisconsin Land Information Association

American Congress on Surveying and Mapping

American Land Title Association

ONE COUNTY'S EXPERIENCE WITH AUTOMATED INDEXING

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ABSTRACT

County governments use document indexing systems to manage a wide range of county records. Indexing those documents is a tedious process that requires time-consuming manual data entry. The indexing of structured documents, such as forms, can be automated; however the average county must also process unstructured documents. Land records such as mortgage documents and property legal descriptions are a few examples of unstructured documents that are indexed. This paper will discuss the experiences of one county that implemented new technology for automated indexing of unstructured documents. The county had long been struggling with a backlog and could not afford to add staff. By incorporating intelligent OCR technology into the county's document management system, they were able to dramatically speed up the data entry process, eliminate the backlog and reassign employees.

THE PROBLEM: A GROWING BACKLOG

In 2003 the average county recorder was overwhelmed with official documents to record. Home sales caused a dramatic increase in the volume of documents coming into the county for recording. Yet many counties were strapped with tight budgets and simply could not hire more people to handle the increased workload. This resulted in a backlog of documents that needed to be recorded. A recorder's goal is to stay "current" with as short a delay as possible between receiving a document and recording that document. Being current means the county's database is reliable and up to date. As long as a backlog exists, a county will not be current.

County documents are recorded through an indexing process. While each county has its own system, they generally follow a similar workflow. Records are received by the county and scanned. Certain pieces of information are used to track the document. For example, on a mortgage document the recorder may use Grantor, Grantee, Document Date and Document Number. The recorder pulls up the scanned image, enters this information into the database, and then for verification the information is entered a second time. The process is tedious and the costs are measured by keystroke.

Waukesha County Wisconsin is just west of Milwaukee. The Waukesha County Register of Deeds office employs a staff of 13 data processors, receives 900 documents each day (more than 3,100 pages) and uses 5 data types for indexing. Due to the large volume of records they found themselves weeks behind schedule. The staff worked diligently to get current, but it was an impossible task.

The obvious way to streamline the workflow and save money for the county is to reduce the number of keystrokes. The key is to reduce the amount of manual data entry by automating the

process. There have been products on the market for years that automatically process data and complete forms. So why were these data processors continuing to enter data by hand?

Most automated data entry software works with forms, spreadsheets and business documents that are described as “structured” documents. As the name implies, structured documents have a pattern to them which makes it easy for software to locate and retrieve the required information and then enter it in a database. The software knows exactly what to look for and where to find it. Many county records, land records in particular, are not structured documents. With these unstructured documents the information could be anywhere on the page. Traditional automated data entry software would not effectively automate the indexing process for county recorders.

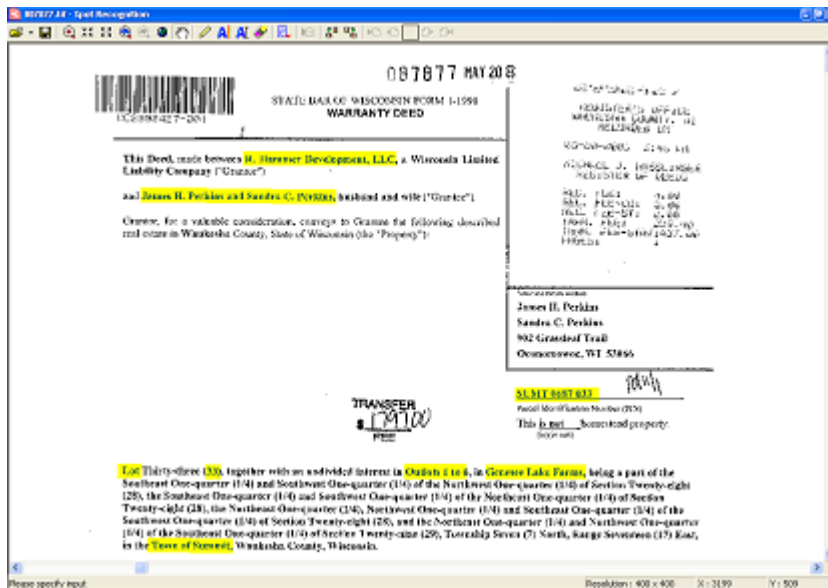


Figure 1: A scan of a typical unstructured document recorded by the county.

Solution: Automated Indexing

To streamline the workflow, reduce keystrokes and save money, county recorders need automated data entry software that works with unstructured documents. The software should be compatible with the current workflow and invisible to the user. Changes to the workflow or a learning curve for new software could delay the improved efficiencies.

UCLID developed an Automated Indexing solution that works with unstructured documents like mortgage records. When the data processor opens the scan the software processes the document and finds the buried data fields like Grantor and Grantee. The data is automatically entered into the database. The data processor verifies that the information is correct and makes any changes before moving on to the next document.

The screenshot shows a software window titled "Form1" with a menu bar containing "New Text Window" and "New Image Window". The form contains the following fields and data:

Grantor	R. Hammer Development.	Add to DB
Grantee	James H. Perkins and Sandra C. Perkins,	
Parcel ID	SUMT 0687 033	Drafted by
		Kurt Schermacher
Legal description	Lot 33 Outlots 1 to 6 Genesee Lake Farms Town of Summit	

Figure 2: Text from the scan is automatically entered into the database fields.

Other than eliminating costly manual data entry, the workflow is unchanged. The automation happens in the background so the staff did not need to learn new software.

Result: Backlog Be Gone!

The Automated Indexing software eliminated 81% of the manual data entry. The savings to Waukesha County in the first year is estimated to be \$229,000. The software is equipped with a "Rule Set Editor" to help refine the automation. The software uses OCR technology to process the scan and retrieve information. Using the Rule Set Editor, data entry staff can fine-tune the OCR and improve accuracy rates.

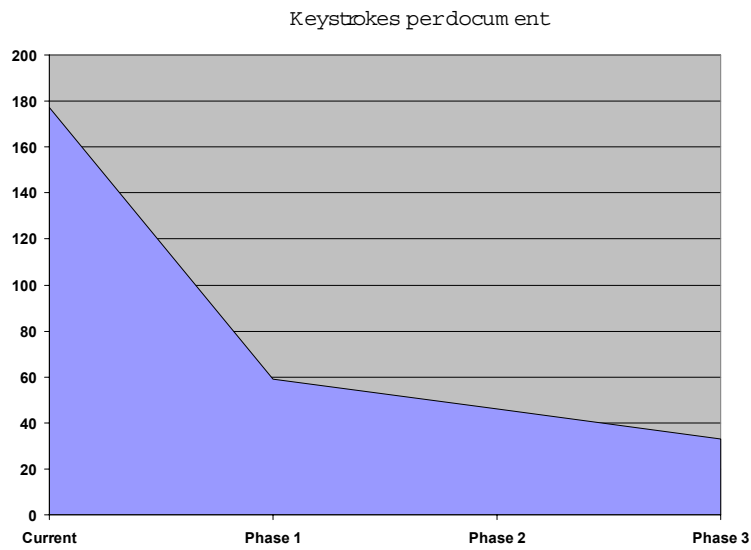


Figure 3: Keystrokes per document decreases as the Rule Set Editor is used.

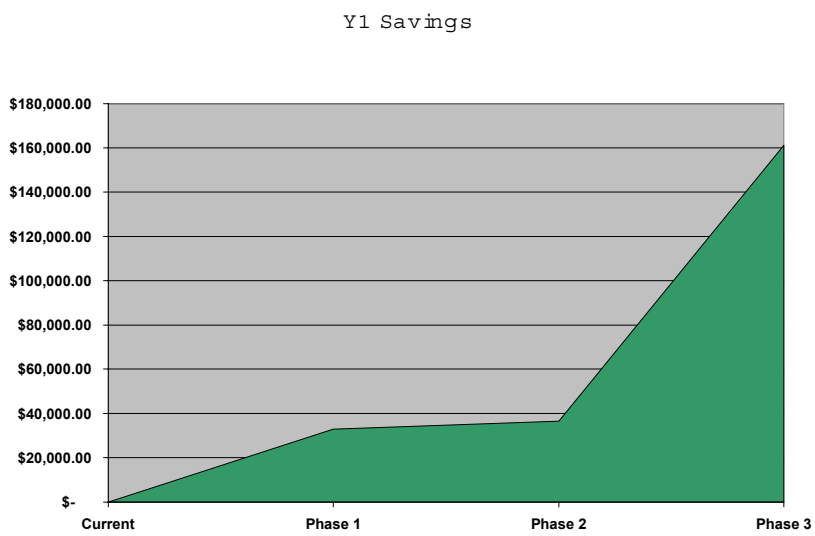


Figure 4: As manual data entry goes down, cost savings go up.