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## Taming the Paper Tiger

Does this scene sound familiar? A resident or owner asks for a copy of a document. You know you have it somewhere. As you look around the office you see file cabinets overflowing with documents and desks covered with stacks of paper. Even the floor looks like it is begging to be filed. With no alternative, you start digging through the piles and spend the next 30 minutes hunting for that elusive piece of paper. Instead of feeling relieved after you find it, you just feel exhausted.

Unfortunately, you are not alone. The average single property generates over 100 pages of paper per year for documents including applications, credit reports, lease documents, bills you pay for the owner, statements to the resident and reports for the owner. If you have been in business for several years and you manage several hundred properties, it doesn't take long until you have accumulated tens of thousands of documents.

The task of digitizing your office can often seem so overwhelming that you never take the first step. On top of the actual effort of converting, you are also faced with numerous technical decisions about:

- the type of hardware you will use to capture documents
- the software to manage scanning and indexing
- the document format
- your document management system
- the document media types
- storage media and backup devices
- security (accessibility and authentication)

In addition to the technical aspects of getting started, changing how documents are stored requires numerous organizational decisions regarding:

- what documents are scanned
- who will scan and index the documents
- what to do with the original documents
- your document retention policy (original and electronic)
- legal issues (signatures, enforceability)
- how to train staff on searching and retrieving electronic copies

- the overall justification of the system (economics, environmental, efficiency)

What we have seen is that companies successful at document management start small, with one or two people who tailor the process to their needs by experimenting with different approaches and document types. After seeing small successes, they then spread that success to more documents and to the remainder of the organization. This article series will provide you with suggestions on technical and organization issues, and hopefully give you some of the information you need to take the most important step—the first one.

### SCANNERS

The ultimate goal of digitizing the office is to have a system where you can walk up to the scanner with a stack of documents, place them in the hopper, and return later to find that all the documents have been scanned and separated automatically into individual electronic documents. The first step in achieving this goal is selecting the scanner. The scanner will handle the mechanics of creating an electronic representation of the physical image.

Scanners come in a dizzying number of configurations. Start simple. You definitely want a sheet feeder model. If many of your documents are double-sided, we highly recommend a duplex scanner. The great news is that the prices of scanners have dropped substantially. Today, you can buy a full duplex color scanner with document feeder in the \$500 range. We typically recommend the black and white scanning of most documents with a resolution of 150dpi (dots per inch). Scanning in color and at higher resolutions increases the final document size substantially. A 300dpi scan can be four times the size of a 150dpi scan.

### SCANNING SOFTWARE

A closely related decision in selecting the scanning hardware is the scanning software. The software controls the scanner and handles the document separation and saving. Read the box carefully when

you are evaluating scanners. Scanners are packaged with a wide-range of software products. Lower-end, consumer scanners are often packaged with limited use, evaluation copies of software. Higher-end business scanners typically include fully licensed copies of software. The software included with scanners is often heavy with features, customizations, and unfamiliar terminology that can be intimidating. The basic features for document scanning are the ability to:

- store the documents to a specific folder
- automatically separate documents by blank pages
- create multi-page PDF images

In response to our customers, we have developed a basic software solution for handling the scanner. This software controls any non-duplex TWAIN (known unofficially as "Technology Without an Interesting Name") compatible scanner. Simple to setup and use, it automatically separates documents based on blank sheets of paper you insert between multi-page documents. It also supports scanning stacks of one page documents without using blank pages. You can obtain a free copy of the software from <http://narpm.propertyboss.com/freesoftware>.

## DOCUMENT FORMATS

Your next selection is your primary document format. The industry standard is the PDF (Portable Document Format) file format created by Adobe Systems. You can view PDFs locally, send them via e-mail or post them on a website. PDFs also support advanced features like security and full text search (if included in the scanner software). Almost all web users already have the Adobe PDF reader installed.

## DOCUMENT MANAGEMENT SOFTWARE

The most important aspect of document management is saving the document where you can easily retrieve it at a later time. Ideally, your property management software (PMS) provides a simple way to organize and link documents to entities like properties, owners, residents, leases, work orders and vendors. The advantages of using your PMS for organizing documents include:

- having to learn and manage only one system
- the ability to find a document in an intuitive location (such as by lease, property, owner, etc.)
- reduced training requirements

Some additional helpful features that you may want to look for include:

- an inbox where documents await linkage to the PMS after they are scanned
- document preview

- document linking to multiple items
- file-based directory structure with a recognizable naming convention
- a convenient, intuitive means to move documents to the filing system

Some systems store the files in a database or use a formula to name the documents. We recommend a file-based method with a recognizable naming convention that does not tie you to the product permanently, allows access to the documents without using the document management system and simplifies backup.

Another approach is to provide a static link to documents that you must manually organize in a file system. The human effort often leads to inefficiencies and misfiling. Also, because you are storing a hard-coded link to the document, you cannot easily move the documents to another location since a move would break all of the links.

If your PMS does not provide these features, an external package may be your answer. A quick Google search provides a number of alternatives that range from basic systems costing \$100 per user to much more comprehensive solutions in the thousands of dollars. Most software in this arena is network-based although web-based solutions are appearing. Picking a vendor in this marketplace when you are not familiar with the technology and terminology can be daunting. If considering a web-based solution, your access to the documents is dependent on the financial stability of the vendor.

I recommend starting with a basic package like PaperPort and DocMoto which provide a reasonable mix of functionality and ease-of-use. Any package not completely integrated into your PMS requires you to develop processes and procedures for storing and retrieving the documents.

## OCR AND FULL TEXT SEARCH

We have not found many of the advanced scanning features to have a very good cost/benefit ratio. For example, OCR (Optical Character Recognition) enables you to search the text of the generated PDF files. While full-text search is a nice feature, we have found that associating the document with its parent entity (work order, vendor, owner, etc.) is a much more useful way to find a document. OCR is a computer intensive, time-consuming process. Most people have found the added cost and complexity of implementing OCR does not generate enough benefits to offset the effort.

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**The average single property generates over 100 pages of paper per year for documents including applications, credit reports, lease documents, bills you pay for the owner, statements to the resident and reports for the owner.**

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Instead, the ability to tag documents with multiple descriptors has proven to be a much more effective way of locating documents.

### AUTOMATING THE LINKING PROCESS

When we first started developing document management features in our property management software, we investigated a number of approaches to simplify the scanning and linking of documents. We tried two approaches: bar codes and document cover sheets. Both approaches required too much manual effort up-front. Neither approach provided the necessary performance when dealing with thousands of documents.

Instead, we found that totally separating the scanning process from the filing process was more efficient. Documents are scanned with a minimum of preparation. Any system user (when time permits) can review the inbox and quickly link documents using a preview of the document on the screen.

Many advanced systems support the ability to automatically distinguish types of standardized documents. Using the example of utility bills, you first

These examples highlight useful descriptors.

For a Bill:  
Vendor  
Invoice Number  
Amount  
Property  
Owner  
Date

For a Lease:  
Property  
Lease Start Date  
Tenant  
Document Type

identify areas on the bill where specific fields are located by drawing boxes in the software. The scanning software uses OCR to recognize the data in the box and automatically provides the link data. While this process works well, its practical use is limited because the volume of documents of any one type from a single source does not justify the effort to create the template, and the data on the document typically does not uniquely identify the entity it is related to. For example, to find the associated property, you would need to have an account number and/or address on the document with the property name. We have found this feature of limited benefit to the typical property management company. If you do handle hundreds of documents of the same type each month, you may want to research this option.

### NEXT MONTH'S DISCUSSION

Hopefully we have whetted your appetite to get started down the digital office path. In our next Technology Matters article, we will review the remaining technical issues related to this journey (such as media support, backup options and archiving, access control, and access to documents over the web). 