

Use Technology is a Tool To Improve Productivity and Quality of Work Product

By Gerald J. Hoenig

1. Ideal work station

a) Computer with two monitors

(1) This is a significant productivity enhancer

(2) Review document on one screen while making notes in word processor on second screen

(3) Some people prefer to use 3 monitors

2. Dictation Software such as Dragon Naturally Speaking

a) Eliminate your poor typing skills to just dictate to computer

b) Use with dictation equipment

3. Heavy duty high speed scanner

a) Scan at least 20 pages per minute or 30 in duplex mode

b) Helps you create paperless office

4. OCR Software

a) Don't re-type existing documents – OCR it

b) OCR is optical character recognition

(1) OmniPage by Nuance has an excellent OCR package

(2) The OCR'd document can be saved in a variety of formats

(3) An aid for due diligence

(4) Not only fully read document, but also search for words and phrases

- c) Checklists for due diligence**
- d) Expert systems for due diligence**

(1) Essential ingredients

- (a) Subject matter experts**
- (b) Knowledge downloaders**
- (c) Template developers**

5. Adobe Acrobat Professional Version

- a) Allows you to build PDF documents**
- b) Easily create closing binders or any time of binder**
- c) Bookmarking and searching ability makes reading on monitor faster than reading on paper**

6. Document Automation

- a) Used by firms of all sizes – solos to large firms**

7. Online backup without human intervention

- a) Protection against disaster**
- b) Easy retrieval**



Technology Property

Technology—Property Editor: Gerald J. Hoenig, 8495 Caney Creek Landing, Alpharetta, Georgia 30005, ghoenig@mindspring.com.

Technology—Property provides information on current technology and microcomputer software of interest in the real property area. The editors of *Probate & Property* welcome information and suggestions from readers.

Document Automation

Document automation software has reached a development stage making it inefficient for law firms, corporate and governmental law departments, and solo practitioners to operate without it. Those who do not use the software will be doing a disservice to their clients and will have a significant competitive disadvantage. As with other tools lawyers use in their practices, they must invest some time to learn to effectively use document assembly software.

Preparing Documents

When I began practicing law in 1969, letters, memoranda, and transaction and litigation documents were generally prepared on a typewriter using carbon paper to make copies. At one of the first closings I attended, a lawyer from a major New York firm representing a large lending institution refused to allow the parties to sign photocopies of a loan agreement. Carbon copies were required because of the concern that the text appearing on the photocopy would disappear in a relatively short period of time.

With improved photocopiers, many firms began to use cutting and pasting as a technique to assemble documents and reduce the need for retyping major portions of them when only a relatively few changes were required. This was not cutting and pasting as we know it today with our sophisticated word processing software. This was using scissors or paper cutters and glue or tape to add or rearrange text and photocopying the result. To a small extent this method is still used today.

With the introduction of typewriters that could store documents on magnetic cards, documents could be reprinted after correcting errors or making other changes without having to retype unchanged provisions. I

recall a number of lawyers shunning this advance in technology because they had perfected the art of cutting and pasting, and, they claimed, the use of scissors and tape could get the job done quicker and cheaper.

Then dedicated word processing machines were developed that provided much more extensive editing capabilities and further reduced the need for retyping by editing a prior document for use in a new transaction. This was before the introduction of personal computers, and these dedicated word processors were very expensive and, as a result, in limited use.

With the development and acceptance of personal computers, word processing technology became much more affordable, and the preparation of documents on personal computers ultimately became the legal and business standard. Over the years, the speed, memory, and storage capacity of personal computers as well as the capabilities of word processing software have greatly increased.

Word Processing Templates

The leading word processing software packages, Word and WordPerfect, have built-in features for the creation of automated document templates that enable all types of document generation at much greater speed than traditional word processing methods. The software allows the material that tends to change from deal to deal, such as names, addresses, phone and fax numbers, amounts of all types, and property descriptions, to be identified and defined in a manner that frees the user from ever having to enter the same information more than once, no matter how many times it appears in the document or a set of documents for a transaction. The capability also exists to select certain words, clauses, paragraphs, or sections to be included or excluded from a document based upon simple or complex conditions. These capabilities are particularly useful in a practice that produces a relatively high volume of similar documents, because individual documents can be produced in less time and with enhanced quality and consistency.

How often do you have an opportunity to improve quality while reducing the time spent on a matter? Usually quality suffers when time is cut.

So how can this be true? It is really not much different from the results to be expected in comparing the work of a firm's well-experienced partner with that of an inexperienced associate. The partner will spend less time to complete the job. With a wealth of experience the partner will also achieve a higher quality work product in less time than the associate takes to produce a product that needs an expert's review to identify issues with which the associate is not yet familiar.

It is important to focus on the "time" being discussed in this scenario—the time from the beginning of the job to its completion—because this is not the only time actually involved. The same is true in comparing document preparation using special automated templates versus the traditional word processing approach of reviewing prior documents, selecting one to use as a base, and choosing appropriate language from other relevant precedents. Just as a partner spends years in practice developing skills and knowledge, for an automated document template, time must be spent in its development. This development time will depend on the complexity of the document, the amount of knowledge being incorporated, the availability of the subject matter expert, the software being used, and the skill and experience of the template developer.

Document Automation Software

Fortunately, the time to develop and maintain templates can be substantially reduced by using commercially available document automation software instead of the built-in features of word processing software. The learning curve to use the built-in word processing tools is often much greater than for document automation software.

The current marketplace leader in document automation software is HotDocs, which is used in many law offices throughout the nation and in other countries. There are a number of

competitive products, and their pluses and minuses will be discussed in this column in the magazine's September/October issue.

How to develop simple templates can be learned very quickly. But, as with most endeavors, developing skills is important to building complex and polished templates that are easy to use and that maximize time savings and the integration of knowledge. A law firm or law department can train existing personnel, hire professionals experienced in document automation as employees, or hire one of the many document automation consultants that develop templates for law firms and law departments. Some consultants are also willing to train existing employees how to create templates. All template development work can then be performed in-house, divided between in-house personnel and outside consultants, or entirely performed outside the firm.

The time it takes to develop a template is an important factor. For example, it will rarely make sense to invest 100 hours to develop a template that is used at most twice a year when it takes only 10 hours to draft the document in a conventional manner. On the other hand, it usually will make sense to invest 20 hours to develop a template if an hour can be saved each time it is used, and it will be used 100 times a year.

Generally, it is better to start out developing simple templates to achieve some quick and early successes and to build confidence in the value of the software. Over time, more and more knowledge can be built into templates that start out as simple versions, and with experience, it will become more feasible to develop more complex templates.

Some people believe document automation ought to be limited to relatively simple documents, because, they claim, legal thought is too complex to capture and build into a template. Others point out that more complicated documents with great amounts of incorporated knowledge yield the best return on investment. Complex templates should produce the greatest

time savings and the greatest quality enhancement. Good returns can be obtained on both simple and complicated templates, so long as they are used with enough frequency to justify the cost of creating them.

Build in Knowledge

So how can you build knowledge into a template? Actually building it in is easy. Identifying the knowledge to include is the time-consuming part. This requires the time and knowledge of those lawyers in the organization who know all of the issues that must be dealt with in drafting a document or particular set of documents. The experts must indicate the document points where revisions should be made depending upon the facts involved. For example, if a set of mortgage documents is automated, the expert must supply the variations to the interest rate provisions that will be required under interest rate scenarios that are likely to be encountered in actual transactions. Wording will be different depending on whether the loan has a fixed rate, a variable rate based upon U.S. Treasuries, or a variable LIBOR rate. The expert will know not only that the interest provisions have to change depending on the rate structure, but also that the prepayment, maturity, and nonrecourse provisions might require changes as well. The expert must be able to specify with a high degree of precision the circumstances under which optional language will be included or excluded. Once this is done, the person coding the template has a fairly easy job to incorporate the knowledge. One incidental benefit from having experts review documents to provide instructions for dealing with optional language are actual improvements to the form documents resulting from a very careful consideration of all parts of the documents. A well-done template should allow an inexperienced lawyer or paralegal to generate an excellent first draft, which has taken into account all of the issues the experts would consider, in a fraction of the time the drafting would take using conventional word processing.

The person using the software to generate the document from the template will be asked a series of questions about the transaction. Depending upon how the user responds to the early questions, additional lines of questions might be asked. For example, in a mortgage loan transaction, if the user indicates that the loan is to be secured by a hotel, questions about licensing and management arrangements will be asked that would not be raised if the mortgaged property were of another type. Questions will be asked to determine if any of the conditions exist for including or excluding optional language as specified by the experts. By using the system, the inexperienced person is made aware of otherwise unknown issues, and the system serves as a training vehicle.

Of course, without automated templates, inexperienced lawyers must query their experts for advice in drafting before, during, and after the drafting takes place. How many times should the experts be required to convey the same knowledge? Once for each associate being trained? Will such advice be fully retained and recalled whenever needed? Repetitions will be required for each inexperienced associate. What happens when the experts are not available to be consulted for various reasons? This delays the drafting process further or gives rise to the possibility of a draft that has not taken into account all of the relevant issues. Why not leverage the knowledge of the experts by building it into automated templates, making that knowledge continuously available to associates, and permitting the experts to devote more of their time to higher value work?

Automated templates are effective vehicles to ensure that newly gained material knowledge is properly used in preparing documents. In drafting documents, the drafter must take into account changes in a client's business policies, developments in the law, and material knowledge gained during transactions by the drafter and by others in the organization. Lawyers and paralegals in a legal organization will be advised of these changes by memo-

randa or discussion. Some developments may require drafting changes only under certain circumstances. Will all important details be remembered and recalled when needed? There is no better way to ensure this knowledge is properly taken into account for future drafting than by making appropriate changes to automated templates. Then no special changes to the documents will be inadvertently omitted. Updating well-prepared and well-documented templates is usually not difficult.

What usually attracts people to document automation initially is speed. I believe, however, that the most important attribute is enhanced quality. Speed is definitely important and a well-constructed template will provide this benefit. Improving turn-around time for clients is always critical in a competitive environment. Improving quality and consistency is even more critical, not only to be competitive but also to limit liability exposure of the client as well as the lawyer. ■

Online Publications

RPPT now has three publications that are available only electronically:

- *RPPT Bulletin*
- *E-Dirt*
- *E-STATE*

What are the differences among them?

- *RPPT Bulletin*
 - E-mailed six times a year to all RPPT members in text-only and Adobe pdf formats.
 - Covers the activities of RPPT Leadership as they advocate for RPPT practitioners. Includes reports on developing Section responses to the government's "Gatekeeper Initiative," the ABA's multijurisdictional practice rules, and Section diversity initiatives.
- *E-Dirt*
 - E-mailed to all RPPT members three times a year, with additional special issues on hot topics as they develop.
 - Covers real estate-related topics, such as recently proposed HUD regulations, toxic mold, and Sarbanes-Oxley for real estate lawyers.
- *E-STATE*
 - E-mailed to all RPPT members three times a year, with additional special issues as necessary.
 - Covers substantive articles about current probate and trust law, such as the pro bono response to September 11, technology issues for probate and trust lawyers, and recent case law and regulatory developments.

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 - Visit our homepage and click "Publications" on the left side. A drop-down list will appear with the names of all our publications. Click on the name of the one you want to see.



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What You Should Know About Document Automation Software

In the last column the importance of document automation as a productivity and quality control tool was discussed. This issue's column discusses the various document automation software products available on the market. Since writing the prior column, the author has taken employment (following retirement from 33 years of practicing law in the MetLife Law Department) with a company that consults in the document automation arena and provides services primarily for two document assembly products. The author recognizes this inherent conflict of interest, but believes he can report on the various products on the market in a fair manner. Rather than expressing a personal opinion, he is reporting on the features of available software products based on data obtained from questionnaires submitted to each software company.

An Internet search for document assembly software currently on the market revealed two broad categories of products available for lawyers. One is software that serves as a tool to automate a firm's or law department's documents. Lawyers use this software to automate their own content. This category was the column's focus in the May/June issue. The other category is automated documents sold with software that enables the user to assemble work product using content provided by the vendor. In this category, providers have developed their own model forms and have automated them to enhance substantially the productivity of the drafting process. Another category is made up of providers of automated forms for use by consumers without the benefit of lawyers. This column, however, is

limited to those whose products are for lawyers.

Providers of automated forms generally target their products to small firms. One vendor, ProDoc, reported that its client base consists primarily of sole practitioners or firms of up to three lawyers. This company has more than 5,000 customers, and its automated forms are currently state specific to Texas and Florida law. Another provider, Wealth Counsel, advised that its subscribers number approximately 500 and that half are sole practitioners with the majority of the other half in firms of ten or fewer lawyers. This makes a lot of sense. Large firms and their lawyers tend to want to use their own forms, and although the same may be true generally for lawyers in mid-size and small firms, lawyers in very small firms may not have the time to develop and maintain the expertise in every area that is available from forms sold by others.

ProDoc and Wealth Counsel sell their forms on a subscription basis. Wealth Counsel charges an initial fee of \$3,900 and monthly fees of \$390. ProDoc's subscription fee depends on the practice libraries selected, and price can range from \$75 to \$125 per month (with additional fees for special libraries). Of interest to real estate practitioners, the basic libraries include real estate, landlord/tenant, and foreclosures, and there is an estate planning library for estate planning lawyers. Wealth Counsel specializes in and is limited to estate planning documents. Its documents do not include state-specific information, other than state-specific notary and witness attestation clauses, and users are asked to enter state-specific citations to code provisions such as the fiduciary powers act and the state durable power of attorney authority. An important benefit subscribers receive is updates during the course of the subscription period. Wealth Counsel maintains a listserv and a knowledge base on its website (www.wealthcounsel.com), which promotes knowledge sharing among its members. ProDoc also provides information at its web site

(www.prodoc.com). Wealth Counsel uses the market-leading HotDocs as its document assembly software, but ProDoc uses its own proprietary system.

Advanced Logic Systems's Document Preparation System 8 provides state-specific documents for all 50 states and the District of Columbia. The documents include estate planning but not real estate. Of interest to real estate lawyers might be the corporate and limited liability company documents. For law firms of five or fewer professionals, the entire portfolio of documents can be licensed for \$495 per year, the limited liability company documents for \$95 a year, and the corporate documents for \$40 per year. For larger firms the respective numbers are \$990, \$190, and \$80 (these prices may vary in some states). The exact documents available can be viewed on the website (www.dps8.com).

One software product that delivers automated legal documents to non-lawyers is Rapidocs. It appears to be a powerful tool for automating documents. Although the software is available to lawyers, its use is generally limited to customizing documents sold with Rapidocs. The owners and sellers of Rapidocs appear to recognize the leadership of HotDocs in the market segment for law firms, so they have elected to focus their product on the market for delivering legal documents to consumers.

Turning to software that law firms and law departments can use to automate their own documents to make the drafting process more efficient and enhance document quality, the companies surveyed were ActiveDocs, DealMaker, FastDraft, GhostFill, Grantha, Pathagoras, PerfectLaw, thinkDOCS, and Amicus Assembly.

To understand the important features of document assembly software, a basic understanding of what the software can do as well as the general nature of documents themselves is needed. Such knowledge will help in evaluating the products discussed below as well as future products as they reach the market.

The Three Basic Elements of Documents

Documents contain three basic elements. One is variable information, which includes such items as names, amounts, addresses, social security numbers, and phone numbers that may change each time a new document is drafted.

The second element is conditional language, which is a text block that can be as small as one character or as large as thousands of words. This text is included or excluded from a document by a condition that can be simple or complex. An example of a simple condition is adding the letter "s" to the word "Borrower" in certain places in a document if there is more than one borrower. An example of a complex condition is if the mortgaged property is located in California, the secured property is an apartment complex, and the amount of the loan exceeds \$15 million. Then a certain clause will be inserted into the mortgage and perhaps a variation of that clause will be added to the unsecured indemnity agreement. Conditional language can be even more complex, because the text block itself may contain variables and sub-levels of conditional language.

The third element of a document is static text, which is text that never changes during the assembly process. Static text is also usually part of text blocks that constitute conditional language.

Assessing Document Assembly Software

In evaluating document assembly software, it is important to see if it efficiently handles the basic elements of a document.

Variables

An ultimate goal for dealing with variables is a system that eliminates the need to key in the same data more than once. The loan amount generally appears a number of times throughout a complete set of loan documents as well as in memos and transmittal letters about the loan. To prepare the entire set of documents,

the user should not have to enter the loan amount more than once. The software should take care of placing the data wherever it should appear. This is true even if the loan amount appears as numerals in some places and as words in other places, or if it is to appear in **BOLD** or in *italic* type in certain parts of the documents. In addition, one variable may be the name of the borrower, and in some places in the documents the case of the name will be in all caps and in other places only the first name of each word is to be capitalized.

The more advanced software provides tools that enable the template developer to cause the same variable information to appear in completely different formats in different parts of a set of documents. Most of the software packages discussed below have this ability. In addition, the advanced software provides text manipulation and mathematical tools to enable data to be derived from other data entered. For example, if the user enters the loan amount, the interest rate and the term of a loan, the software could calculate the monthly payment, or, in a lease, the annual base rent could be computed from the monthly base rent. This not only saves time, but it also helps prevent inconsistencies and errors.

Actually the ability to reduce data input does not stop here. For example, if the name, address, and contact information for the lawyer's client or the other parties to a transaction are stored in the firm's practice management or matter management systems (or any other data storage system), and the document assembly software can access this database, then there is no reason for the user to type in this information. The software can simply insert it from the law office's database. Again, the software provides more efficiency and less chance for error.

To be able to use a data set entered for one document to assemble another document at a later time, there needs to be a facility for saving the data entered. All of the products provide this.

Conditional Language

Conditional language can be handled in a couple of different ways. The simplest is to give the user the ability to select whether the text block is to be inserted into the document during the assembly process. All of the software packages have tools that provide this in one way or another. To get the full benefit of document automation, however, the software needs to have tools that can condition the insertion of a text block into a document on a complex set of conditions. When a template is prepared this way, the user does not have to be an expert in the subject matter to know which clause to include or exclude. The template will take care of this based upon instructions furnished by the organization's experts. The ability to handle conditional language also brings the benefit of automatically selecting the singular or plural of a word, the appropriate gender, and the proper verb conjugation.

Repeated Information

Another very desirable feature of advanced document assembly software is the ability to enter multiple entries of certain types of variable information and having the software automatically deal with it in a customized way, so that time does not have to be spent modifying the document after assembly. For example, if you have a template for a purchase and sale agreement, you want to be able to enter any number of purchasers and any number of properties subject to the agreement. Most of the packages discussed below provide this capability, but some have limitations as noted.

The Software

Pathagoras is marketed as "a plaintext, no codes, no formulas, back to basics, document assembly program." It does a good job for such basic functions. Pathagoras is an example of the distinction between document assembly and document automation. It provides a convenient way to assemble a document that is more efficient than conventional

word processing approaches. It does use variables so it helps with data entry, although it does not appear to have the tools to make the same data appear in different formats throughout a document without multiple entries. In addition, it is limited to 30 variables per document. This might be sufficient for small documents but not for large-scale projects. Moreover, this software does not provide a repeat capability. The product appears to be useful primarily in the small firm or in a small unit of a larger organization. Also, it works as an add-in to Microsoft Word, but does not work with WordPerfect. Pricing and other information can be found at www.pathagoras.com.

PerfectLaw is a practice management system. One of its features is the ability to assemble documents using data from its practice management database. Apart from this data connection, a user must generally use the merge tools of Word or WordPerfect to develop the template. This may be fine with simple documents. For more complicated documents, the merge tools of word processors do not compare in power and efficiency to the tools available in document automation software. Additional information can be located at perfectlaw.com.

ActiveDocs, DealMaker, FastDraft, GhostFill (including Amicus Assembly), Grantha, HotDocs, and

Amicus Assembly is in essence GhostFill, which has been integrated with the Amicus practice management system software. It should also be noted that HotDocs has been integrated with the TimeMatters practice management software. In both cases, the document assembly software can easily use the data from the practice management software to which it is integrated.

DealMaker and Grantha are not currently being marketed to law firms or law departments in the United States. DealMaker is produced by an English company that claims its product has captured the majority of the top ten firms in England as clients. Marketing in the United States is being considered. Learn more about DealMaker at www.business-integrity.com. Grantha has been successfully used to permit members of the public to assemble documents on-line. For several reasons it is not yet active in the law firm/law department market. For more about Grantha, visit www.ssquaretech.com.

HotDocs is clearly the market leader at this time. The approximate number of licensed users for each actively marketed software packages is set forth in the table below. The table also shows the strength of the support for updates and fixes in terms of the number of programmers working on those matters.

Software Product	Approximate Number of Licensed Users	Number of Programmers for Updates and Fixes	Web Sites
ActiveDocs	200,000	18	www.keylogix.com
FastDraft	9,000	2	www.valeossoftware.com
GhostFill	11,000	12	www.ghostfill.com
HotDocs	400,000	10	www.hotdocs.com
thinkDOCS	Not available	Not available	www.thinkdocs.com

Based upon unverified vendor information.

thinkDOCS all have the tools to obtain the maximum advanced benefits from using variables and conditional language as discussed above. Each has a different interface, and each has its strong and weak points.

thinkDOCS software has a unique feature not available with the others products. When a document is assembled with all of these products, a word processing document is generated that can be edited further, just

like any other document. As the document is changed, because of negotiation or otherwise, the assembled word processor document can be modified as in the past. The software products are generally only aimed at producing a first draft. With thinkDOCS, however, the variables remain "alive" in the assembled Word document (thinkDOCS does not work with WordPerfect). The significance of this can be illustrated by the following example. If the loan amount is changed for the deal, the amount can be modified in one place in the assembled thinkDOCS document and it will be modified everywhere it appears in the document. This is an advantage primarily after the first draft, because all products permit changing any data before negotiated changes are made.

The thinkDOCS approach has some drawbacks. Because conditional language inserted in an assembled thinkDOCS document does not remain "alive," much, if not all, of the advantage is removed. If changing the loan amount requires the exclusion of conditional language that was included in the original assembly, that exclusion will not take place automatically in a thinkDOCS assembled document (re-assembly will be required just as with the other packages). In addition, one of the ways thinkDOCS is able to keep its variables live is by having all of its conditional language in variables and not on the face of the document. Although this is not a problem with the functioning of the software, it makes it more difficult for the lawyer to review a template for substance and see what the alternate provisions are from the face of the template. In addition, this feature apparently also causes thinkDOCS to lack as robust a repeat capability as the other packages.

The reader should now know the important features to consider in selecting document automation software. It is important to understand what to look for, because the software products are always changing, and new products enter the market from time to time. ■

Theme Calendar

To encourage readers to write articles for the magazine and to assist Section committees in planning their publication projects, *Probate & Property* has adopted the following editorial theme calendar. Each issue will include one or two property articles and one or two probate and trust articles related to the issue's themes. Other articles of general interest will also be included.

Publication deadlines require that articles editors receive article drafts several months before publication. The magazine's memorandum for authors gives more details on the format, length, and style of the articles. The memorandum may be obtained by contacting the managing editor or at www.abanet.org/rppt/publications/magazine/memo_for_authors.pdf.

Readers are invited to submit articles for consideration, both on the listed themes and on other topics.

Issue—March/April 2004

Exotic Real Estate and Affordable Housing
Estate and Trust Administration

Article submission deadline: **November 3, 2003**

Issue—May/June 2004

Title Insurance
Employee Benefits and Retirement Benefits Planning

Article submission deadline: **January 5, 2004**

Issue—July/August 2004

Management/Technology

Article submission deadline: **March 1, 2004**

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Basic Principles

In considering the subject matter to cover in this column, the author spent some time recalling the various topics covered since commencing these columns in 2002. It is difficult to believe that five years have passed. Some of the columns covered some basic and rather critical core principles in office technology. Some are so important they need to be repeated periodically. That will be done here, in addition to covering some new thoughts not previously discussed.

Back Up Your Files

A good backup system is essential for any office where documents are stored on computer hard drives, CDs, DVDs, tape, or other storage media. It is clear that enormous amounts of office space can be saved by storing documents electronically rather than in paper form. Without a good backup system, however, lawyers are subject to losing all of their essential documents. This may not only have a material adverse effect on the lawyer but also on the lawyer's clients as well. Some might suggest that paper copies are a good backup for electronic versions of the documents, but that all depends. If documents are lost because of a bad hard drive in a computer or on a network, paper copies would be helpful if no backup had been made at all. On the other hand, if the electronic documents are destroyed because of a natural disaster such as a hurricane, tornado, flood, earthquake, or other casualty, it is likely that all paper copies will be lost as well. This writer believes the following are essential elements of a good backup system for electronic documents.

- The system must be automatic. Relying on a human to initiate the backup process each day is too risky. Lawyers and their staffs are

often so pressed for time that a ministerial task such as clicking on an icon to start the backup process has the lowest priority of things to do and may easily be forgotten.

- The physical location of the backed up electronic files should be far from the office location. The backup storage location should be outside the potentially affected area of any casualty or any single or series of related natural disasters or casualties that may materially damage the office location. Ideally, as an additional safety factor, there should be at least two backup storage areas. There are companies that provide such services for a reasonable price. The computer in the author's office is automatically backed up between 3:30 a.m. and 4:30 a.m. every morning. During each backup, only files that are new or that have been changed are backed up, and the backup service actually retains several versions of the changed documents. On the two rare occasions that files had to be retrieved, the files were located and downloaded within a couple of minutes, and the author was offered the choice of which of the last five versions of the files were desired; all five versions could have been downloaded, if preferred. The service the author uses now also provides remote access, so he can download any file that has been backed up from his office desktop onto his laptop no matter where he travels—so long as he has an Internet connection. The system does not automatically save every file on the desktop's hard drive. The user designates which folder to save, or if an entire folder is not desired, specific files within a folder can be designated for backup.
- Although it is important to back up files containing work product documents, it is not necessary to back up application files such as Word, WordPerfect, or Excel. If those files are lost, the user can

always re-install the software applications. Generally, an application cannot be re-installed simply by copying the files that were backed up. Most often, a special installation program on the original application media must be used.

Consequently, backing up the application files will probably be a waste of time and money.

Leverage Your Organization's Intellectual Capital

No matter how small or large your office is—from a solo practitioner to a firm with more than a thousand lawyers—technology can improve the office's service to its clients, reduce its exposure to liability, and enhance its bottom line. This advice is not limited to law firms but also applies to corporate and governmental law departments as well.

- Technology has provided tools to help make the knowledge within the organization more readily available to those who need that knowledge to do their jobs more effectively to serve the organization's clients. This knowledge transfer has always taken place, and the means of doing so have evolved over the years.
- Technology can free up the time of subject matter experts in an organization to do higher-value work.
- Tools that have been used as repositories (in paper or electronic form) include memoranda, briefs, model documents, on-the-job and formal training materials, books, educational programs, and other methods. They have been effective, but now computer software provides more effective tools to use along with such methods. The author believes that expert systems should play an important role in efficient knowledge transfer. Perhaps the easiest way to develop expert systems is through the use of document automation software. This software is relatively inexpensive compared to the software tools required in the past.

To take advantage of expert systems, the organization must be willing to invest the time of its substantive legal experts in working with systems developers to incorporate their knowledge into these systems. This concept is really the same as having these experts invest their time in any of the more conventional knowledge-sharing methods. The initial investment in time to develop expert systems will most likely be greater, but the payback will dramatically outweigh the benefits of more conventional methods. In addition to facilitating knowledge transfer in the organization, the end result will be to institutionalize the expert's knowledge and make it available when the expert is unavailable because of meetings, vacations, and even after retirement from the firm.

Even though document automation software may be used as a tool for developing an expert system, the utility of the system is not limited to those who draft documents. The same software, presented in a different format, can be used as a tool to assist a lawyer or paralegal to review documents of any type, including title policies and surveys. In fact, a document review system may be a more valuable system, because, generally, more lawyers and paralegals review a particular document than draft one in a real estate transaction. The same system used for reviewing title and survey documents and the organizational documents of a borrower also may be used by the same lawyer to facilitate the drafting of a mortgage or deed of trust, or vice versa.

The end result will be higher-quality due diligence and document drafting in a significantly reduced time frame.

Some New Topics

Virus Protection

A very basic and important principle that has not been touched on by earlier editions of this column is the protection of your computer against

viruses and spyware. A number of software packages are available. Recommended are those that check out all e-mail that arrives in the user's inbox as well as all documents as they are downloaded or opened. The more advanced solutions are automatically updated on a daily basis, assuming the computer is turned on every day. In addition to using such software, a policy of not opening any e-mail attachments or clicking on e-mail links unless the user knows that the source of the e-mail is safe and reliable should be followed. Also, do not rely on the sender if you see that the e-mail was merely being forwarded to you.

Counterfeit Sites

If you receive an e-mail from a financial institution requesting that you update your information on its website, do not use the link in the e-mail to access that site. Too often this leads to a counterfeit site that looks remarkably like the real one, with logos and all. This is an easy way for an identity thief to steal your ID and password to the financial institution.

Remote Access to the Office

During the last six months, the author has successfully used GoToMyPC, one of the methods available for remotely accessing an office computer while traveling. Obviously, to use such a program, the office computer needs to be on full time and connected to the Internet while the user is away from the office. At a hotel with a high-speed Internet connection, the user goes to the GoToMyPC website and signs in with an ID and password. After signing in, the user is presented with a list of computers to which he or she has access. (The author only has access to *his* office computer so his list has only one item.) The link to that computer is clicked, and, as an extra measure of security, the user must then enter an access code. The first time the author tried this, he forgot about the need to bring his access code and was quite disappointed when he realized that his ID

and password were insufficient to use the system. There was no way to obtain the access code without physically being at the office computer. The next time he remembered. After correctly entering the access code, the user sees the same display on his or her laptop screen as would be seen if the user were physically present in front of the office computer. The keyboard and mouse from the remote laptop then can be used to run applications or do anything else that could be done by the user if the user were at the office (except for such physical acts as inserting a DVD into the office desktop DVD player—although a DVD can be inserted in the remote laptop and files can be copied from the DVD directly to the office desktop computer). Although the user can run applications on the office computer from the remote laptop computer, the office computer's response time will not be as fast as it would be if the user were physically working on the office computer. This is not because the office computer is working any slower. It is because it takes some time to transmit the images of the desktop's screen over the Internet. The response time, however, is reasonably good and was improved when advice from the GoToMyPC website was followed to reduce the number of colors displayed from thousands to 256.

It is very easy to transfer files in either direction between the remote and office computers. This can be done by using the simple-to-use file transfer module easily accessible from an on-screen menu. File transfer, however, also can be done by dragging a file or group of files with the mouse pointer from a folder on one computer to a folder on the other computer.

One challenge the author experienced relates to the fact that his office computer has two monitors connected to it, while his laptop only has one. GoToMyPC handles this very well. If the user is looking at a document on the office's right-hand monitor but wants to see what is on the

left-hand monitor, all the user has to do is move the cursor to the left margin of the screen and the laptop screen will then pan over to the left-hand screen. It is very easy to move back and forth between the screens, although that is obviously not as useful as having both screens in view at the same time.

The author had one more opportunity to challenge GoToMyPC. His laptop is able to use a second monitor in addition to the built-in screen. After hooking up the additional monitor, he found that GoToMyPC was designed to take advantage of a two-monitor office setup with a two-monitor remote setup. It was very easy after viewing the help file (because there is no direct selection for this feature from one of the menus) to have both screens in the office display on the appropriate screens of the laptop computer. The only slight glitch was that the office computer has two standard-dimensioned 19-inch monitors hooked up to it, while the remote laptop has a built-in 17-inch wide-screen monitor with the additional monitor having a 20-inch wide-screen. This caused the right part of the left office monitor to display on the left side of the right monitor hooked up to the laptop. This was a little awkward, but not a problem.

One additional problem that detracted from the experience was that while traveling, a thunderstorm knocked out the power at the office. Even though the office computer was hooked up to a backup power supply, the electricity was out longer than the backup power supply could remain powered on. As a result, when only about five minutes of power remained, the backup power supply safely shut down the office computer. Once shut down, the computer could no longer be accessed by GoToMyPC because it was no longer connected to the Internet. Remote access is possible after power is restored, even if the office computer requires a user to sign in with a password, because the user can sign on remotely. Of course, someone must

be available to restart the office computer, unless the user can and does set up his or her computer to automatically start up at a set time each day, which is possible on some Windows-based computers.

Try Out Wikipedia

During the past year, the author has used the on-line encyclopedia "Wikipedia" with amazing results. For example, its coverage is astonishingly current and extensive. A number of the items reviewed had been obviously updated within the previous day or two of viewing. Wikipedia describes itself as a "multilingual, web-based, free content encyclopedia project. Wikipedia is written collaboratively by volunteers from all around the world." Accordingly, the user should not assume it is a definitive source. The author suggests, however, that it may be a useful source of information you should review and consider. ■

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The Mortgage Crisis and Expert Systems for Due Diligence

Expert systems can serve as effective tools to improve the due diligence process for real estate transactions (and actually for all types of transactions including mergers and acquisitions). Expert systems provide users with the knowledge of experts on how to deal with a specific problem or series of related problems. For example, in the real estate finance sector such a system can focus on whether certain documents affecting a parcel of real property create issues that have a material effect on the value of the parcel of property. Expert systems are built on the knowledge of experts in the particular field, including the knowledge of how to solve the subject problem reasonably and efficiently.

While expert systems are useful tools for managing due diligence for all species of real estate transactions, their implementation and use also can be one step to take to regain the confidence of investors in the quality of securitized loans—whether used by lenders, purchasers, rating agencies, or regulators.

Clearly, the investment community's loss of confidence in commercial real estate mortgages produced by conduit lenders is a major factor in the increased yield requirements demanded by purchasers of interests in such mortgages. To a great extent, this decline in trust comes from the debacle in residential mortgages. Conduit lenders were producing residential mortgage loans that should never have been made if sound loan underwriting requirements were being followed. Many shortcuts were taken in the lending process to produce a volume of loans sufficient to satisfy the voracious appetite of the investment community for interests in large pools of residential loans.

Although the commercial mortgage

loans produced by conduit lenders have not resulted in significant delinquencies (at the time I am writing this column in October 2008), the investment community has become skeptical about the quality of commercial mortgage loans produced by the same group of conduit lenders that have produced troublesome residential loans. Any problems with the underwriting and due diligence of commercial loans will not surface until the loans are examined (1) for delinquencies, (2) for sales of the loans or of interests therein, or (3) reviewed by regulators and/or rating agencies. Because of the great volume of loans to examine, it is not clear how deep such examinations will go.

To understand the need for additional rigor in the due diligence process, consider the environment in which the loans were made. Commercial mortgage lenders were in a very competitive environment. In particular, conduit lenders (as opposed to lenders making loans for their own portfolios) that made loans for the purpose of placing them into large pools of loans, the interests in which were intended to be sold primarily to institutional investors, wanted the greatest volume possible because they made their money on the fees earned. The more loans, the more earnings. To be competitive, the rate of interest is obviously important, but the service provided to borrowers is also critical. Lenders' reputations in the borrower community are generally enhanced by quick turnaround times and quick closings. Lenders do not want their reputations to be damaged by taking too much time to approve any facet of a commercial real estate transaction.

Many due diligence elements come into play when originating a commercial mortgage loan. They include, but are not limited to, the review and analysis of (1) the value of the property, (2) the credit of the borrower and other material parties (such as guarantors of the borrower and certain significant principals of the borrower and guarantors), (3) title matters, (4) survey, (5) leases, (6) material contracts relating to the operation of the

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property, (7) zoning, (8) environmental conditions, (9) litigation affecting the property, the borrower, or other material parties, (10) insurance on the property, (11) the physical condition of the land and all improvements, and (12) the documentation relating to the formation and operation of the borrower and other material parties.

Some due diligence items referred to above are part of the underwriting process performed by business analysts, such as the credit of the borrower and the value of the subject property. The lender's lawyers tend to review title, leases, contracts, and entity documentation. The lender has other experts review zoning, environmental, and property conditions, although the lawyers may participate in these reviews based on the particular circumstances or preferences of the lender. A primary purpose of the legal review is to determine if the documents or conditions being reviewed have a material effect on the value of the subject real property.

With the need for quick turnaround times and quick closings for lenders to remain competitive and the expectations of the various parties that approval is only a few seconds away by e-mail or notation on a transaction website, there is a great deal of pressure to perform all due diligence to meet the tight schedules for closing the loan.

The focus of the balance of this column is on the due diligence performed by the lawyers. That is not to suggest that the due diligence performed by the business people and their other experts could not benefit from the use of an expert system. Clearly, it can.

The lawyers are under great pressure to meet the time requirements of their lender clients. If they fail to meet the target dates for performing their required tasks without good cause (and some lenders might not be willing to recognize good cause), they face the possibility that their client will use another firm. The lawyers are also under pressure to keep their fees at a competitive level. In almost all cases, it is the borrower that

pays the lender's counsel fees, but a lender's competitive position will be adversely affected if its counsel fees are regularly greater than those of the competition. Clearly, some law firms have recognized this and established very efficient operations by adopting effective processes for performing due diligence in a timely manner.

Generally, the legal due diligence work is not performed by the most knowledgeable lawyers working on the transaction. Often the work is done initially by a paralegal or junior attorney who is in the process of building his or her real estate knowledge. Their work will most likely be reviewed by an experienced lawyer. Typically, the experienced lawyer does not have the time to repeat the initial work. If that time were available, there would be no reason for the initial review. The possibility exists that, because of the time pressures on the initial review and on the review of the more experienced lawyer, certain critical issues will not be spotted. Because of the pressure to meet a deadline, the lawyer and paralegal (no matter how experienced and knowledgeable they are) may overlook things learned from experience, training seminars, and discussions, or from reading books, memos, and other materials. Not everything is remembered at every moment, particularly under the pressure to meet a deadline.

So how can an expert system help improve the due diligence process? I can give the example of one I developed for reviewing leases. After a more than 30-year career in negotiating, drafting loan documents, and performing due diligence for commercial mortgage loans for a large institutional investor, I spent a period of about two-and-a-half years reviewing leases for law firms representing large conduit lenders until the conduit lending market collapsed. During those two-and-a-half years, I reviewed more than 700 leases.

To enhance my productivity and ensure quality and consistency, I developed an expert system to facilitate lease review. (I should note that I had

also developed a couple of expert systems during my career with the institutional investor—for both commercial mortgage loans and residential loans.) As a result, I significantly reduced the time to review a lease and prepare a lease summary. I built into the system a good deal of knowledge to reduce the possibility of failing to consider certain issues that were not specifically addressed in leases. Believe it or not, some leases fail to contain default, condemnation, and other significant provisions. Generally, lenders identify how certain significant issues are dealt with in the lease and whether any additional issues should be brought to the lender's attention. Some of those additional issues may arise because of special provisions added to the lease or by the omission of provisions that would ordinarily be expected to be present in the lease. Such expected provisions vary depending on the type of project, such as a shopping center, office building, or warehouse; the size of the project; whether the property being leased is a building, space in a building, or land on which the landlord or the tenant is to construct a building; or other factors. The system allowed me to review the lease from beginning to end and to identify issues as they arose in the lease without requiring that I address issues in any specific order. After reviewing the lease, the system would prepare a lease summary in the format desired by the lender (the system would automatically alter the format depending on which lender requested the review) and a transmittal letter that highlighted the most significant issues noted during the review process.

Such a lease review system is even more valuable when a paralegal or a lawyer in the early stages of his or her career is doing the review. The system can (1) identify issues that they might not otherwise recognize, (2) answer questions for them that they might otherwise have to wait to discuss with a more experienced lawyer (who might be unavailable because of meetings, negotiations, business travel, vacation, illness, or otherwise), and

(3) point out that an experienced lawyer should be consulted on certain specified issues before considering the review complete. In this way, such a system is also a useful training tool.

The bottom line for such a system is (1) to increase productivity by reducing the time necessary to complete the lease review, (2) to increase quality by reducing the possibility that significant issues might be overlooked, and (3) to increase consistency so that the client receives similar comments about the same issue, rather than an array of different descriptions of the same issue depending on which one of many individuals is preparing the lease review.

This same approach can be applied to title review and the review of significant documents. A number of years ago, I was a principal member of a development team that produced an expert system to enable paralegals or law students to review whole residential loans purchased by institutional investors. One of the more significant portions of the system was the review of the land survey and title policy and all of its schedules.

Using innovative approaches like these to accomplish due diligence can help bring more confidence to investors that purchase interests in conduit loans (or any loans for that matter). The fact that a system is available for use that can improve the quality and accuracy of due diligence may raise a question about whether a firm or corporate law department performing the due diligence is exercising due care if it fails to implement or use such a system.

If the Emergency Economic Stabilization Act of 2008 results in the acquisition of a great number of troubled loans from lending institutions, expert systems will enable the due diligence to be performed in a quality manner by a large group of lawyers and paralegals that have not yet developed a great deal of experience in real estate.

Additional uses for expert systems may be in the decision-making processes of the business people when they are confronted with issues raised by the lawyers as a result of the due diligence process. Even though

business people are very bright and well educated, they do not always have the necessary experience to make good judgments about whether the issues raised by the lawyers require corrective action or whether the issues may be considered nonmaterial to the subject loan. As mentioned above, business people are subject to great pressure to get their loans closed. Their incentive compensation is based on the volume of business successfully closed (although such compensation arrangements possibly may change as the result of the mortgage crisis). Using an expert system to assist their decision making may prove very helpful, and if the inputs and outputs (or selected portions thereof) from the system are required to be furnished to supervisors, loan committees, auditors, rating agencies, and/or regulators, that could go a long way toward improving the ratings and the confidence in the practices of the mortgage lenders. ■

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