

Chapter 8: Implementation

Thousands of details attend the implementation of electronic filing or any major new technology. If a project is not well planned, many of these details may not be apparent until they bring activity to a halt. Although it is not possible to outline all of the implementation steps for every conceivable electronic filing project, what follows is an attempt to cover elements that may appear in most.

The discussion of technology deployment is divided into three sections: initiation, planning and implementation. Implementation issues relating to automation in general are covered in *Automating Court Systems*¹⁶² and are not repeated here.

Project Initiation

Project initiation is the activity that occurs from the first indication that a problem exists or may arise through the creation of a project management structure and process. It includes recognizing the need for electronic filing, setting goals and objectives, obtaining a commitment from the court to solve the problem, recruiting progressive law firms to participate, acquiring planning resources, and establishing a project management system. Thorough attention to each step of this process is necessary to establish realistic expectations for electronic filing.

Recognition of need

Electronic filing technology can benefit courts and law firms in many ways, but it is not a magic solution to all problems. A requisite first step in project initiation is to understand the problems that exist in the justice system and find appropriate solutions. An electronic filing system will do little to improve poor calendar management, for

example. The following are examples of problems that may be corrected by electronic filing.

- **Customer service:** Inability to answer routine questions from the case management information system without tracking down the paper file.
- **Redundant work:** Dual entry of data from documents to computer systems adds to the work of overburdened staff, producing higher error rates and case processing delays.
- **Workflow problems:** Inability to define unique paper processing procedures for specific types of documents, resulting in bureaucratic and inefficient paper flow.
- **Staff performance:** Inability to monitor and manage the productivity of staff engaged in paper processing work.
- **Redundant record systems:** Law firms are required to duplicate court record systems because of the inability to access judicial case files quickly and inexpensively.
- **Lengthy delays attributable to file management:** Pulling case file jackets, inserting documents and re-filing delay action in cases.
- **Inadequate storage space:** The growing numbers and size of case files strain space available for storage.
- **Security:** Microfilming of documents as they are filed (in addition to microfilming at the conclusion of the case) is necessary to assure the court's ability to reconstruct lost files.
- **Damaged records:** Wear and tear on papers and folders threaten the integrity of case files.

Too often organizations acquire a technology solution, then look for a problem to fix with it. Computerization is far more effective when designed to address the specific a court is facing. The same is true with electronic filing. Courts and law firms should

¹⁶² Lawrence P. Webster, *Automating Court Systems* (Williamsburg, National Center for State Courts, 1996).

evaluate their problems and needs carefully before deciding if electronic filing will be beneficial.

Goals and objectives

Once the challenges a legal system faces are documented and understood, leaders will be in a much better position to move forward. The next step in the process is to set goals for solving the problems that have been identified. This may not entail the immediate implementation of electronic filing. For example, improvements to the court case management system may resolve a portion of the difficulties, while at the same time emphasizing the benefits to be gained by electronic filing.

The process of setting goals and objectives is beneficial because it gets everyone involved to agree on what will be done, as well as what will not be done, before resources are inefficiently expended. It begins a practical and political process of introducing change into the system. Change redistributes power and other resources in an organization or system, and could, for example, upset the competitiveness of law firms in the area.

Goals should define the ultimate outcome expected of the project. Objectives subdivide each goal into narrower and shorter-term pieces. Both goals and objectives should be:

- Specific.
- Measurable.
- Realistic.
- Attainable.
- Clearly articulated.
- Established by consensus.
- Broadly communicated throughout the organization.
- Generally accepted by everyone involved.

Most goals are established at the policy, legal and operational levels. Courts and law firms also should address technical goals for system performance. These goals and objectives should cover system:

- Availability.
- Maintainability.
- Interconnectivity.
- Security.
- Reliability.
- Portability.
- Scalability.
- Simplicity.
- Usability.

The following are a few examples of goals that could be established for an electronic filing project. While the list is not exhaustive, it provides samples from a broad range of possibilities.

1. **Electronic case file.** The court will create an electronic case file that will replace the paper folder as the primary source of information about the case. It will contain all the documents, attachments, photographs, and other materials traditionally found in the case jacket.
2. **Access.** The court will provide free public access through the Internet to the electronic case file within the bounds of existing statutes and court rules governing the security and confidentiality of paper records.
3. **Access to other resources.** The court will provide access to dockets, calendars and other resources contained in the case management system in the same format as it provides access to the electronic case file. The docket will serve as a register or index to all actions, events and documents in the case.
4. **Electronic filing.** The court will allow any interested law firm that uses equipment and software that meets system standards to file all papers electronically.
5. **Filing and access times.** The electronic filing system, electronic case file and case management system will be available to the public and law firms 24 hours a day, seven days a week, except for scheduled, routine system maintenance. System availability during normal business hours will exceed 99 percent, and will exceed 95 percent during times the court is not open.

6. **Cost savings.** Processing of electronic documents will increase the productivity of court staff and reduce operational cost by eliminating much paper processing tasks, redundant data entry, etc.

Court commitment

The next step in the project initiation phase is obtaining commitment from court leaders to proceed with the electronic filing project. Chapter 2 covers this topic thoroughly, and includes three elements of the business case: benefits of electronic filing, assessment of the technology options and lifecycle costs. It is essential that court and law firm leaders work together from the beginning of the project, or it will fail.

Lawyer support

Even though a few technology-adept lawyers may take a leading role in convincing courts to develop electronic filing, often they do not control the resources within their firms and cannot decide to participate in the venture without convincing others within the office. Marketing to decision-makers in law firms is also an important step, as was shown in Chapter 2. Consultants, vendors or other service providers with experience in working with attorneys can assist in this activity.

A surprising number of courts have built electronic filing systems without adequate consultation with the lawyers who would use it, thinking they could dictate internal business decisions and procedures within the law offices. Policy, management and technology leaders from both sides must develop a flexible solution that matches the capabilities and resources that are available. The system also must be flexible, so it can be adapted to future changes in the legal environment. This can only be accomplished with a great deal of communication and cooperation.

Acquire planning resources

The second phase of the project will require significantly more resources than the first. During the planning phase, a needs assessment, conceptual design and implementation plan will be developed. In addition, system standards will be determined. These activities may require workers and skills not available to the courts or the law offices. Experienced consultants could be invaluable if current staff is too overburdened to complete the project. It would not be unusual to require two or three individuals for a period of three to six months to complete the planning phase of the project. Larger or more complex operations may require significantly more help.

In addition to staff or consultants assigned to work on planning, other employees of the court and law office also must participate. The planning team must meet with individuals in many parts of the organization to learn how it works and help gather necessary information. This will temporarily reduce the availability of staff as they participate in the needs assessment and related activities.

Leaders of the court and law firms should determine who will be responsible for completing each task and then pursue the acquisition of funding from management or funding bodies to complete the work. This step also may include the hiring of consultants.

Establish project management structure and process

Every endeavor requires the coordination of the work of many individuals. Court and law firm leaders must establish structures and procedures for making decisions and assignments, for solving problems that will crop up from time to time, and for keeping commitment high within all of the organizations that are involved in the electronic filing

project. Trying to decide who is responsible for making a decision while in the middle of trying to make one is a recipe for disaster.

A typical approach is to create a steering or advisory committee that is representative of all the organizations. It should include policy leaders and workers who are familiar with internal operations and the implications of decisions. Some committees include technologists, while others have them serve in an advisory capacity.

Once the structure is in place, it is essential to have the individuals meet, receive instruction in their duties and work out the ground rules for committee operation. Technology staff can help organize this meeting. It is not uncommon for these groups to have only limited decision-making authority, though they tend to work better when every decision is not reviewed at a higher level. In other words, they should have sufficient authority to keep the project moving forward, but also should be required to obtain approval for decisions that commit significant resources of their organizations.

Project Planning

This is the phase of the project at which most of the important decisions are made after an intensive study of work processes and available options. The implementation plan, which is the final product of this stage, outlines what work must be done, who will do it, when it must be completed, and how much it will cost.

The planning phase of the project consists of seven steps: evaluation of need, analysis of current system, review of options, conceptual design, development of standards, creation of an implementation plan, and acquisition of resources to complete the project. Each is discussed below.

Evaluation of need

The evaluation of need for an electronic filing project consists of two parts, an evaluation of workflow, as would be done for a case management system project, and a review of the technology infrastructure of the court and law firms. The project team interviews and observes people doing their day-to-day work, documenting processes carefully. Another helpful technique is to review case files. This will help provide realistic data about the volume and type of documents filed with the system.

The product of the needs assessment is a formal document that describes how work moves through court processes, including estimates of transaction volume. It also includes a listing and analysis of the system components of any personal computer networks, case management system, document management system, and communications networks that are already in place.

Analysis of current system

The evaluation of need is a description of workflow and system components.¹⁶³ It is also necessary to conduct an analysis of problem areas, and processes and equipment that likely will require modification or replacement as electronic filing is implemented. For this reason, it is important that staff analyzing needs assessment data be familiar with electronic filing technology and its potential for changing work patterns.

A good example is the personal computer network that may be in use. While some older PC models may be adequate for word processing functions, they may not have the power or display resolution to show document images clearly. These personal computers must be upgraded or replaced before electronic filing technology is deployed.

¹⁶³ Chapter 2 of *Automating Court Systems* contains a detailed review of tools and processes for conducting the needs assessment.

In addition to reviewing workflow and equipment needs, staff conducting the analysis must look at higher-level issues, including organization and staffing, court rules and operational procedures, potential legal obstacles (as outlined in Chapter 3), and other policy issues (found in Chapter 4). A mistake repeated many times in early experiments with case management systems was to overlay technology on manual processes with minimal change to those work patterns. This produced inefficient systems that often failed to benefit from the new tools that were installed. Today, most organizations appreciate the value of reengineering to productivity and success with technology.

Review of options

Electronic filing technology cannot be purchased in a shrink-wrapped package. No vendor offers a product that can be installed in a few days, at least not yet. But even though electronic filing is still an emerging technology, it is not necessary to build it from scratch. Many components of such a system are mature and stable products. It is important to understand the difference to assess risk successfully. The challenge is to select and meld appropriate components so they work effectively and efficiently, engineered so they can handle peak loads when the system is fully operational. This is no simple task.

Other options exist, such as using service providers for certain parts of the process. Most courts are leery of outsourcing important functions, but must remember that they now rely on many outside service providers in moving documents from place to place. For example, the post office, delivery services, couriers, telephone companies, credit card companies, and banks all are part of the current legal system infrastructure. In a similar way, electronic commerce will rely on outside service providers. Until electronic

commerce is fully established, courts must decide how extensively to rely on the private sector to complete judicial business.

What choices exist for courts and law firms building an electronic filing system? The use of telephone companies and Internet service providers may be obvious. If digital signature technology is used for authentication and encryption, a number of other service providers may be available, such as certification authorities, public key repositories, etc.

It is certain that vendors will provide bundled electronic filing services for courts and law firms that will eliminate the need to perform many of the functions defined in previous chapters. For example, companies may receive and authenticate documents submitted by law firms, add date and time stamps, and pass them along to the court, eliminating many of the security issues and other procedural requirements from the court's implementation plan. They may provide other services, such as linking documents to statutes and case law, and posting selected documents to public repositories, like Stanford's securities litigation site.¹⁶⁴ Additional features will be developed as electronic filing technology matures. The added value of these features will furnish additional incentive to law firms and courts to use private sector service providers.

Case management systems will offer a challenge to court leaders who want to move ahead with electronic filing, only to discover that their existing computer system is inadequate or will require extensive modification. Because the case management system must serve as the index to the document management system, it must be stable and capable of meeting most of the data needs of the court. It is also a good idea not to implement electronic filing with a case management system that, even if meeting the

needs of the court, is nearing obsolescence. Any case management system will require modification to work with electronic filing; courts should be aware of the time and cost of making these changes and compare them to the expense of acquiring a new system. Some vendors are developing integrated case and document management systems, including electronic filing.

While this discussion has centered on the court case management system, it is important to note that many law firms also have comparable systems to manage their workloads. It is assumed that they will undergo the same process of integrating their case and document management systems.

The document management system is usually a new component for courts and law firms. These systems have not proven practical without electronic filing where they have been tried, because of the high cost of converting paper to an image format.

Document management technology is not as mature as case management systems, but will improve with time. The court must select a package that is capable of storing and displaying text, popular word processing formats, print formats like PDF, and images. A problem with some of the first electronic filing systems was the inability to accept images of pages that were not created on the attorney's word processor. Attachments will continue to be submitted to the court and must be included in any successful system. It is also essential to provide flexibility, especially the ability to add new formats as they become popular. Some electronic filing systems still rely on WordPerfect 5.1, and cannot accept documents created in Windows-based formats.

In building the document management system, designers must allow for the conversion of documents stored in older formats, and must be aware of records retention

¹⁶⁴ See <http://securities.stanford.edu/index.html>

issues. While most court personnel would like to have every document ever filed on the system, in reality, performance issues will require older closed cases to be warehoused on another server—still accessible, but not interfering with system operation.

The choices for communications are limited. Some courts instituted dial-up systems to accept documents, and others more recently have built private networks. The Internet has emerged as the only realistic option for courts and law firms just beginning the process. While existing networks may be adequate for data systems, electronic filing technology will require greater bandwidth to handle much larger transactions.

The options available for the electronic filing components of the system are tied to the scale of the system and the level of security desired. At the low end, courts could allow lawyers to access the document management server directly. At the high end, multiple servers could fill a variety of purposes, such as firewalls, electronic in-boxes, public access, and document storage. Chapter 6 provides a more detailed explanation of these options.

Conceptual design

The conceptual design will have two parts, document and workflow, and technology components. The first part describes how electronic pleadings will be created in a law office, transmitted to the court and served on other parties. It details what happens to the document when it arrives at the court, including indexing entries in the case management system. It explains the various paths the paper may follow as court staff processes it.

The second part of the conceptual design covers the technology that must be developed for the system to work properly. At a high level, it shows each piece of hardware and software, and how it contributes to electronic document processing. It shows the interfaces that must be developed and how they will work.

The conceptual design provides the vision of how the court and law firms will operate in the electronic world. It serves as a reference manual for the technologists building the system and for administrators reengineering the working environment. It is also a valuable tool for maintaining enthusiasm and commitment within the organizations that may be struggling with the added work the analysis and design processes have created.

Development of standards

At a minimum, standards must be created in three areas: documents, data and communications. Document standards should exist at two levels, content standards and technical standards. Content standards refer to the electronic equivalent of formatting: page limits, font and margin sizes and so forth. Most courts impose requirements on the legal community; standards that must be modified to accommodate electronic filing. For example, it may not make sense to establish page limits on documents that may never be printed on paper. In the electronic world, courts may require paragraph or line numbering, rather than page numbering. Instead of page limits, there may be restrictions on the number of characters submitted, or the number of hypertext links to external sources.

Technical standards for documents refer to format of the electronic file in which they are stored. Dozens of text, word processing, printer, and image formats exist, and the court must decide which ones it will accept or exclude. The capabilities of the document management software, and the personal computers in the court network, will dictate which options are best for the system.

Data standards also are important. Many courts require cover sheets with documents. These cover sheets are simply a way to pull information from the document so a clerk can enter it into the case management system without reading the document and guessing

about the meaning of terms. With electronic filing, there is an even greater need for formatted data, because the system can place it directly into the case management database to serve as an index to the pleading. In other words, if the information is formatted, data entry is eliminated. Data standards ensure that information provided by the lawyer will pass edits and will be accepted by the case management software. The standards should list the data elements required and acceptable codes, ranges and other edits that will apply.

Communications standards define the capabilities of equipment that will connect to the network. In a dial-up environment or private network, this includes communications protocols with a lot of technical jargon. For the Internet, it may be as simple as a list of browser plug-in packages that are required to view all of the materials stored in the system.

As has been mentioned, it will be necessary for the court and participating law firms to maintain the standards as they are developed. As new software, formats and protocols are established, they should be quickly incorporated. Older standards should be dropped as soon as all of the organizations are ready and when conversion of documents to a newer format is completed.

Creation of an implementation plan

An implementation plan will encourage the courts and legal community to walk through the implementation process in great detail. It will ensure that realistic time and expense estimates are prepared, and generate consensus about the work that needs to be done, who will do it, when it will be completed, and how much it will cost. The implementation plan will aid leaders with project management for the remainder of the deployment effort.

The plan should contain five components: tasks, schedules, assignments, budgets, and deliverables. Chapter 1 of *Automating Court Systems* describes some of the tools used in project planning and management, like the Work Breakdown Structure, Gantt Chart, PERT chart, Network Diagram, Critical Path Method, etc.¹⁶⁵

Identification of the tasks that must be completed is the first step. Each task should be broken down into its sub-components until it is possible to estimate the amount of time necessary to complete it. The task list conceivably may include hundreds of items.

Many tasks can be finished concurrently, but some cannot begin until others are completed. Once these dependencies are identified and mapped out, it will be possible to schedule the work. The schedule will be modified as staff is assigned to each task. Since some tasks will be completed by court personnel while others are done by law office employees, it is important to separate this work into categories so each organization can identify its responsibilities and resource requirements. Since there are limits on the amount of hours a person can work, an overbooked staff member can delay project completion. Shifting assignments to others or adding staff can shorten the time needed for completion.

Once assignments and schedules are prepared, budgets can be generated. The cost of equipment, software, space, and other expenses are added to personnel costs. The final step is to define the deliverables for the project. These are milestones that measure progress. The payment of contractors and vendors should be tied to acceptance of these deliverables.

¹⁶⁵ Lawrence P. Webster, *Automating Court Systems* (Williamsburg, National Center for State Courts, 1996).

Acquisition of resources

With the implementation plan in hand, project leaders can request funding. This is an opportunity to reinforce work done initially to sell the plan to the organizations, restating the benefits and cost savings, and expense. Since most of the decisions have been made, it will be possible to be much more specific about the cost of the electronic filing system.

Project Implementation

The implementation plan covers all of the work described in this section. The group responsible for creating the plan should provide oversight to the implementation process, with the project manager responsible for day-to-day activity. During the implementation phase of the project, the oversight group must complete a transition of its role from project management to system management. This means that the same group that supervises the development and installation of the electronic filing system will continue to provide oversight once it is operational. They will be responsible for creating policies and procedures, introducing improvements to the system and solving high-level problems.

As new hardware is installed and new procedures implemented, it is important to make appropriate preparations to the facilities so the equipment and users can function properly and efficiently. Chapter 5 of *Automating Court Systems* contains a great deal of advice on this subject.¹⁶⁶ Other work also must be done, such as acquisition or development of the various components of the electronic filing system, which are detailed in the next five sections of this chapter. Work also is required to train staff,

¹⁶⁶ Lawrence P. Webster, *Automating Court Systems* (Williamsburg, National Center for State Courts, 1996).

prepare for startup and begin operation of the new system. These topics are covered in the sections that follow.

Case management system preparation

The case management system used by the court must be adapted to perform many new functions. New fields must be added to hold record keys to pleadings stored in the document management system. Some data fields may be deleted from the case management system, such as one that gives a summary of the contents of a document. Since the entire document is available and searchable, the summary has much less value.

Computer programs may be required to call document management system routines from the docket and other access points in the case management system. A user, for example, may want to view a particular paper listed on the docket screen of a case. With a mouse click or press of a key, the document should appear. In a similar manner, a user of the document management system may be reviewing a scheduling order in the electronic case file, and may want to see what other cases are on the calendar for the same judge that day. The case management system must be able to respond to calls from the document management system to provide this type of service.

The electronic filing modules may pass formatted data for entry in the case management system. The case management system must be capable of accepting and processing this information (perhaps after quick review by a clerk). It also may be required to respond to the filer with a docket number assigned to the new case, a scheduled date and time for the hearing requested, or with other similar information. The quality of the interface between the case management system and the electronic filing components is key to realizing increased staff productivity from the new technology.

Personal computer and network preparation

Several issues with existing personal computers and networks must be addressed before the implementation of electronic filing. The use of electronic documents will increase network traffic significantly, so upgrades may be required to supply sufficient bandwidth for smooth operation. Individual personal computers must be evaluated to see if they are adequate for the new working environment. The primary issue is the size and resolution of the display monitor, but processor speed, memory size and disk capacity also are factors to be considered. Some courts have found success with large monochrome monitors, which are much less expensive than their color counterparts.

Another important consideration is the availability of public access workstations. Since the court will reach the point where no paper files are available for some cases, making PCs accessible to the public becomes a much higher priority.

Law firms also must review the quality and capacity of their personal computers and networks. Appropriate communications capabilities, as well as the ability to view images, may be necessary.

Communications preparation

As with the court's internal networks, the level of traffic on external networks also will rise significantly. Whether the court chooses dial-up modems, network modems, bulletin board servers, or the Internet, increased capacity may be required.

For these networks it is important to look at the current strategy for providing service, such as the use of communications firewalls, routers, hubs, and switches, the use of proxy and mail servers, the capacity of telephone lines, the capability of Internet service providers currently used, and so forth. Perhaps the network and communications software may require an upgrade, or the court may have to switch from ISDN to T1 lines.

Identification of bottlenecks in the system will be important. Significant upgrades in one area may have no effect on response time if a bottleneck exists somewhere else. What appears to be a communications problem actually may be an inadequate server or slow disk access.

Finally, it is important to consider how to monitor system usage, particularly if users are billed based on connect time, transactions or some other similar measure. Some type of billing and collection system, integrated with usage monitoring, may be required.

Document management system preparation

The document management system likely will be a new component for the court. This is software that can organize and retrieve documents in a variety of formats: text, word processing, printer file, and image. The document management system should have a user interface that makes it difficult or impossible to tell the difference between file types; everything looks like a printed page on the screen. It also must be able to handle documents generated by the case management system.

As has been mentioned, it will be necessary for the case and document management systems to communicate with each other and function as an integrated, single product. If not, redundant data entry, lack of synchronization and other problems may result. The document management system also should be able to keep a log of transactions for security purposes.

The document management system probably will reside on a server that is dedicated for this purpose. The equipment and software must be installed and tested to ensure they are working properly before tests on the interface with the case management system and other components begin.

Electronic filing components preparation

The number and type of components in this area will vary greatly, depending on the size of the court and legal community, the volume of cases that will be processed, and the strategy chosen by court and law firm leaders. A variety of functions may be performed in most implementations, though they may reside on separate servers in some areas, and may be consolidated on fewer machines in others.

The first function is interaction with the user. As attorneys file papers with the court, they will be required to interact with the system through the World Wide Web, a private network, or dial-up system. As they pass documents and data, the system must inspect them and provide immediate feedback if there are errors. It should provide confirmation of successful filings, as well. The system should log all transactions for purposes of security and document authentication. Routines also will be required to allow lawyers and the public to view documents filed electronically.

The electronic filing system may perform document authentication functions, such as verifying the digital signature affixed to the filing. It also may complete service of process (or notification of service) on the other parties in the case.

Other routines may detect new filings on an in-box server and pull the documents and data through the firewall for processing by the case and document management systems. Again, how a court (or service provider) chooses to perform this function could take many forms.

Testing

After individual components of the electronic filing system are installed and tested, it is important to conduct thorough end-to-end tests that will identify problems between

components, and help determine if system performance will be adequate to provide acceptable response times for users.

Training

The success of any automation endeavor depends on individuals with the lowest pay and least respect of any employees of the organization, those doing data entry. It makes little sense to invest thousands or millions of dollars in new systems and fail to provide adequate instruction to baseline system users.

Electronic filing training for court staff should be an extension of case management system training. Separate programs must be developed for law office employees who perform much different functions within the system. Training must recognize the new operational procedures that are being implemented along with the technology. In-depth training must be provided for supervisors and those responsible for maintenance of hardware and software systems.

Most reference and training documentation is now provided on-line. This is a good strategy to use with new electronic filing systems. These materials must be prepared before training begins and must be used in training classes. Again, different materials probably will be required for court and law office staff.

In any automated process, quality control also must be an issue. The court should extend audit functions for financial and case management activities to cover document management systems, as well. This auditing will help identify needs and weaknesses in the system and in the training program.

Startup

As with case management systems, courts must deal with many problems while in transition from one system to another. They must prepare for concurrent implementation

of new technology and procedural changes. Normally, a period of parallel operation is required with new technology, which can double the workload of staff. There is the problem of receiving documents electronically for cases already containing paper pleadings. There are parallel paper and electronic paths that will make locating information slower. There are the frustrations of a learning curve that may make the new technology seem overwhelming to some users at first. There also may be issues of data conversion in the case management system.

There are ways to solve all of these problems. It is important that these plans be made months, rather than days, before system implementation.

A final issue related to startup is system evaluation. From the first day of operation, it is necessary to assess response time and other system performance issues. Problems should be noted, and plans made in advance for correcting them. As time goes on, project staff should look back to the original goals and objectives for the system and determine how much progress has been made.

Operation

New work is generated whenever technology is implemented. Production activities that may accompany electronic filing include running activity reports against transaction logs to profile system use and manage billing processes. Other production activities could include procedures relating to electronic service of process, verifying data supplied to the case management system, etc.

Problem management is another operations activity that requires attention. If a successful help desk has been established to support the case management system, then additional training for staff and the development of procedures for troubleshooting

problems may be all that is required. Users will require immediate assistance when they encounter problems.

System backup of the document database, transaction logs and other records also must be performed. File and disk reorganization and defragmentation, all of which must be done on a regular basis and require a block of time, must be completed, as well. These procedures should be nearly identical to those developed for case management database resources.

It is important to monitor system performance, particularly as the volume of documents on file increases and as the number of users grows. System monitoring software tools can help identify potential bottlenecks in sufficient time to prevent them from becoming noticeable to users.

A final operational area that requires attention is system security. Transaction logs should be reviewed and operational procedures enforced to prevent unauthorized access and other security breaches. Again, it is essential to develop and implement these procedures before problems occur, not after.

Summary

While implementation of an electronic filing system is not beyond the capability of most courts, it is a complex activity. If court leaders plan carefully, most of the bumps in the road should be relatively small and manageable.

