CHAPTER EIGHT

TECHNOLOGY IN THE COURTHOUSE

COMING CHANGES IN CASE FILINGS

by Roger Winters

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Roger Winters

I. PAPER FLOW — TORRENTS OF HARD COPY

Today, there are about 500,000 "active" hard copy file folders in the King County Superior Court Clerk's custody. Nearly 2 million more cases (dating from 1853) have been retained on microfilm. The law says court files are to be retained "indefinitely" — every document filed in a court file is to be available 100, 200, even 500 years from now. Litigation and criminal proceedings are increasing, filings are more numerous, folders are fatter, shelves are bulging. There is no new space, no new shelving, no new room for this material.

We receive, process, and file huge amounts of paper. If stacked, our average daily receipt of 5,500 documents would tower to 7½ feet. This represents nearly 26,000 pages each day, close to 6.5 million pages a year (that's 1/3 of a mile high if stacked; 865 miles of 8½" paper if laid side by side).

In King County Superior Court today, it takes a document up to five days to reach its case file folder. Each of the documents is date-stamped, sorted, read, docketed into the Superior Court Management Information System (SCOMIS), routed to staff for processing, reviewed by title insurance representatives, and sent to Files. There, we sort and re-sort and put the papers into their respective file folders on shelves throughout our 8,000 square feet of file rooms: in the Courthouse, at the Juvenile Court Clerk's Office, and at 2 off-site storage areas.

A typing error or number transposition means a misfile, a "lost" document that results in courtroom delay or worse. Staff conduct "critical searches" as needed to locate documents-in-demand, *provided* the 5-day distribution period has elapsed *or* the situation is truly urgent, particularly for the Court.

Some documents really do get lost and have to be reconstructed. Clerks do sometimes make mistakes that other clerks can't readily notice and fix. Parties have been known to remove pages from the one-and-only case file in the Clerk's Office reading room. (Since we have caught many trying, we know others succeed.) Attorneys sometimes, on orders to remove files for copying, return them with mis-stapled pages or with documents in another case's folder or missing altogether. Filing errors may not be discovered until archive time: when case files have been inactive long enough, they are removed from the shelves and microfilmed.

When a missing document cannot be found, we substitute a copy of it from an attorney's files (lawyers are "officers of the court") or certain other accepted sources such as certified copies. Filings from unrepresented parties (*pro se* litigants) are usually backed up at the front-end: the most-troublesome-when-lost go out for security microfilming before we file them in their folders.

We meet or beat the five-days-to-the-file standard with most documents; sometimes it takes extra effort (people or overtime). Even so, litigants find the 5 day period of the Clerk's paper flow hard to understand.

III. HARD COPY — HOW HARD IS IT?

"About 50 percent of the cost of running the court is attributed to moving paper, so there are tremendous potential savings [in electronic filing]."

Judge Arthur M. Ahalt, Prince George's County (Maryland) Circuit Court
quoted in *Government Technology*, July 1995 (p. 34)

Judge Ahalt's claim that hard copy is half the cost of running a court is not far off. Consider as well what it costs *you* to prepare and submit a hard copy court filing. A pleading is researched, drafted, dictated, keyed in, reviewed, redrafted, re-keyed, edited, finalized, data-entered, printed, proofread, signed, messengered, delivered, conformed, filed, and served, all within a demanding time frame. How much time can be assigned to the simple cost of producing and moving hard copy from place to place?

Look at it another way: What steps and costs could you eliminate if allowed to drop anything which does not add to a document's *content*? What is saved when you cut out all actions that are neutral or fail to improve the message, style, persuasiveness, meaning, or impact on judicial decision-making?

You file the *original* in the court's file, which the Clerk keeps. Often, you also give the Court extra copies, because it takes time for "paper flow" to get the paper to the file and because it takes the Clerk time (1-3 days) to get files pulled and delivered for a scheduled court calendar. This is why you prepare duplicates to be sure the judge can read pleadings prior to a court proceeding. These "working papers" or "judge's courtesy copies" have to be filed in time in specific places (which vary depending on the matter). The stakes can be high and the consequence of error great — if the working papers go to the wrong place or get labeled incorrectly, they are lost, ignored, re-routed (perhaps too late), or thrown away. Working papers are not to be put in the file, since duplicates mean double preservation costs.

A court file can be checked out to only one-user-at-a-time. This is like a library, except a library can provide extra copies of books in demand. You can see a court file *only* in the Courthouse in downtown Seattle (where parking can cost $5 to $15!). If the file is out to a courtroom, Judge, or court staff, it will be unavailable to you for some time. Waiting for a file, returning again and again to see whether it is back, is frustrating and expensive.

When the file is not checked out, be glad if it is not located off-site. That means one or several days more before it can be brought in for you. Most active files are on the 6th floor of the Courthouse, retrieved for you when available within 10 minutes of your request. The Clerk uses many techniques to track files and get them to you: color coded tabs, terminal digit filing, and bar-coded file inventory tracking software. Often some documents are stored separately because of size; others are unavailable because they've been sealed. Identities are checked to ensure security over sealed files and papers.

V. FAX FILING — ONE SMALL STEP...

In 1992, the King County Superior Court, by a General Order, authorized that documents could be filed by facsimile machine. This changed our notion of what is an *original* document in the court file, altering our general understanding, or *paradigm,* of what makes a document "original," from which certified copies can be made. It also changed the Court's *place paradigm*, since for the first time one could file an "original" document without coming, sending someone, or mailing something to the Courthouse. It somewhat modified our *time paradigm* — one can get a document to the Clerk's Office even if the Courthouse is closed (with the understanding it will be filed effective the *next* court day).

By September 1993, General Rule 17 allowed fax-filing in any Washington county willing to use it. The faxed document, marked "FILED BY FAX...," is recognized as the court file's original, kept with other pleadings "indefinitely." To protect against tampering, filing parties are to keep the "original-signature document[s]" until at least 60 days after case completion. This makes it possible to present them to the Court if needed. [See APPENDICES 1, 2, and 3, on pages 14, 15, and 16, for details on fax filing.]

Fax filing has many advantages: Fax-filers avoid a trip to the Courthouse or beat deadlines without fear about being tied up in traffic. Frequent-filers, *e.g.*, attorneys based away from downtown Seattle, sometimes find the fax fee costs less than conventional delivery or mail. Even so, fax filing has been a fairly *uncommon* practice in King County, with 10 or fewer fax filings per average court day. Hundreds of firms and practitioners are registered for fax filing, but few use it routinely.

The Clerk does not yet use the fax for outgoing notices, service, or other purposes. Fax filing remains a one-way street. Fax filing enables remote filing, but not remote access.

VII. THE FAX AND THE DOCUMENT IMAGE

Consider what happens when a document is faxed: It is usually prepared in computer-readable form when word-processed in a computer. The codes that constitute words and sentences are *digitized*, *i.e.*, expressed in "ASCII" (American Standard Code for Information Interchange), which another computer can display as words and sentences. Before we fax a document, we print it onto bond paper and add an inked signature, taking away its computer-readable properties.

The act of faxing does "computerize" a document, but differently from the computerizing of word processing — a fax machine scans the page and describes the patterns of black and white encountered. It makes a large computer file that can only reconstruct the page's pattern and display it as an image; it cannot recognize or act on data in the document. Instead of ASCII-based words, a fax recognizes only dots and white spaces. The machine takes away the words and substitutes instead a map of the way the document appears. Take a look at a newspaper photo with a magnifying glass and you'll see dots. To a fax machine, a fax image is just a pattern of dots, or "pixels," which it records as a "bit map" file to send to the receiver's fax machine.

Still, because we can send information across town or around the world electronically in just a few seconds or minutes, we have tended to look upon faxing as a very modern business tool. A few years ago, a visionary image of court files might have proposed capturing faxed images and storing *them*, not hard copy originals, in electronic storage media. It would have required enormous amounts of computer memory and space, and the indexing and retrieval would have been very difficult to accomplish. That is perhaps why faxing was not and is not the answer to the problem of how to manage all this information created and then printed on hard copy.

A fax "bit map" file of a page's image takes more than 200,000 bytes of information (compressed to 50,000-80,000 bytes for transmission): it takes several seconds to fax a page. Whether captured as a file or printed out, a fax must be *read by a person* to get information from it, whereas a word-processed, digitized document could be "read" by a computer and processed accordingly. A page in ASCII code takes up less than a tenth of the computer memory (storage space) occupied by a fax's bit mapped image.

The next step in improving the court document has long been thought to be "document imaging," the scanning of paper documents into fax-like image bitmaps, to be stored for electronic retrieval to image-enabled computers (with costly memory and large video displays). Interest in imaging remains widespread in records management and court areas. Very successful programs involving imaging have been implemented. For example, you can get a ticket handled at any Municipal Court office in Los Angeles County because all tickets are centrally scanned into electronic images; any ticket can be called up on any connected terminal. Previously, tickets had to be handled at the site nearest to where the ticket was given; the motorist had to go to where the ticket was to dispute it. A similar program is in place in Orange County, California. Some courts of general jurisdiction have installed imaging, notably DuPage County, Illinois, and Washington County, Oregon. The Chelan County Clerk is experimenting with imaging. The Clallam County Clerk has an IBM system installed, the first Washington County to use document imaging.

Imaging is catching on and it remains a promising option for many courts and businesses because it is a much more efficient way to handle hard copy. More than one user at a time can look at the image of a document. Though images are computer memory hogs (50,000 to 80,000 bytes in *compressed* format), they still take less space than hard copy requires. Often imaging is obtained with "workflow" management software, using the computer to route images from desk to desk, eliminating the movement of papers.

Imaging, for all its advantages, leaves us rigidly tied to the idea of the hard copy document, the printed, signed page. It is a way to handle hard copy, but it does not change the way we approach the *information* the hard copy provides us and the court.

The idea of imaging was something we were studying closely for the King County Superior Court, until last fall, when many court officials attended the Court Technology

Conference IV in Nashville. Since October 1994 we have been very excited and interested in taking a step beyond imaging, to *electronic filing* and a truly *electronic court file*.

IX. THE ELECTRONIC COURT FILE

The *electronic court file* is being implemented in the Utah Courts [See APPENDIX 6, page 19 below, for a reprinted article explaining how it works in Utah]. Another form of electronic filing is in use in the Snake River Basin Adjudication District in Idaho. Both systems were demonstrated effectively at the 1994 Court Technology Conference. This, along with a presentation about how information systems can be leveraged into business process reengineering, gave a breakthrough experience to a number of Washington court leaders. A dozen or more of them met before leaving the conference, determined to bring these revolutionary concepts home to Washington.

The electronic court file is based in a fundamental conceptual change: the "original" court document becomes, not an original-signature (or fax-filed) hard copy paper, but an electronic entity placed in computer memory in the custody of the Clerk. The original, once recorded onto media such as Optical Disks (OD) with WORM ("Write-Once, Read-Many") security, or Compact Disk-Read Only Memory (CD-ROM), remains there, never to be altered. There is no "losing," "misfiling," or even touching the electronic original. Copies of these electronic originals can be displayed on computer screens or can be printed onto paper. There is no limit as to how many people can be looking at a copy of the original at a time. There is no need to be in the courthouse to access the information in the electronic file. The information is available to whoever needs it when they need it. Sealed document and file access is governed by security procedures and controls such as passwords.

An electronic court filing is made up of the original word-processed document, but not including any of the proprietary codes which word processing software adds to describe the way in which the document is to be organized and displayed. The computer-readable documents created by word processing are converted to ASCII code. In this form, they require about 2,000-4,000 bytes per page, less than a tenth of the space needed to store the image of the printed page. Smaller files mean quicker copying from computer to computer, so it takes considerably less time to send and receive an electronic page than an image or a traditional faxed page.

Two factors make it possible to use a purely electronic document as an original court filing: 1) electronic/digital signatures and, 2) data mark-up for automated processing.

1) The Digital (Electronic) Signature. Digital signatures are being developed, for use in courts as well as in commerce. The American Bar Association has a task force working on model legislation to enable digital signatures in court documents. Businesses are clamoring for secure electronic signature and encryption, to make secure retail sales and commercial transactions possible across the Internet and other networks. A bill enabling digital signatures passed the Utah legislature last year; a similar bill was introduced into the Washington State Legislature.

Meetings this year will bring together agencies and interests who want secure digital signature procedures identified and authorized here.

How does the digital signature work? [**Alan Asay** of the Utah Courts explained digital signature theory in the *Practitioner's Guide to Electronic Filing in Utah Courts; A How-To Manual for Lawyers, Legal Secretaries, and Litigants in Utah State Courts (pages 11-12);* thanks to him for permission to paraphrase him.] It would take a cryptologist to understand and explain the digital signature in detail. Here is a simple explanation: Each person gets a *private* and a corresponding *public* encryption key. These keys are tracked by a trusted institution with strong security. To sign something digitally (electronically), you select the text or pages being signed, turn on your *private* code, and a coded message is produced and added to the document. A recipient applies your *public* code to decipher this message and learn that it was, indeed, created by using your *private* code. The procedure provides the same services which an original signature does for hard copy. It gives authentication, identifying the signer with the document. It provides security by your using a code known only to you (registered securely in a repository) — *i.e.*, only the signer can make a signature. Alteration is detectable because any attempt will result in an invalid code placed in the document. The signer is bound because only the signer could have digitally signed the document.

The judicial process provides an additional check: all litigants can see the documents in a court file and can bring to the court's attention any concern about the authenticity of any item or signature there.

2) Data Markup in Electronic Documents. When data elements in a document (*e.g.*, the case number, plaintiff's name, attorney's Bar number, the pleading type, a summary) are pointed to by "document mark-up" techniques, they can be "read" and processed by computer. (Utah uses Standard Generalized Markup Language [SGML]. World Wide Web users on the Internet are already familiar with an SGML derivative, HTML [Hypertext Markup Language].) We need to be able to copy data automatically from electronic filings to Washington State's Superior Court Management Information System (SCOMIS) and other databases. We now routinely build a detailed docket which lists every document filed and each event that occurs in each court case — a Clerk reads each document and makes appropriate data entries. With electronic documents, we could automate most of this data entry, reduce costs, increase processing speed, and eliminate data reentry error.

For a detailed view of how such a system can work, see Alan Asay's *Toward Paperless Utah Courts*, reprinted by permission as APPENDIX 6, page 19. King County has proposed a similar design in a submission from the Department of Judicial Administration for the 1996 Budget. Whether this design or a variant is used, most of the key concepts are the same.

An electronic file system will work best when most documents are filed this way. We expect, nevertheless, that hard copy filings will be unavoidable. In an electronic filing system, hard copy is scanned as images, stored with the ASCII documents in the electronic court file. An

image is just larger, takes longer to transmit, and requires that a person read it to act on the data and instructions it contains.

A fundamental change in the nature of the court file's original record enables other changes. As we change the way we do the business of litigation, we will realize more substantive savings and efficiencies for everyone. Consider this from *Reengineering the Corporation*, by Michael Hammer and James Champy (HarperCollins Publishers, 1993), Chapter 5:

> Information technology plays a crucial role in business reengineering, but one that is easily miscast. Modern, state of the art information technology is part of any reengineering effort, an *essential enabler* ... since it *permits* companies to reengineer business processes. But...merely throwing computers at an existing business problem does not cause it to be reengineered. In fact, the *misuse* of technology can block reengineering altogether by reinforcing old ways of thinking and old behavior patterns...

They tell us to ask ourselves, as we engage in technological change, *"How can we use technology to allow us to do things that we are <u>not</u> already doing?"* As we look to documents for the information they convey, unconcerned about the medium in which the information is expressed, we can better do our business. Let's not just automate processes invented to manage hard copy; let's change the way we share information. Why should we continue with judicial procedures adopted because of hard copy after we have freed the record from its limits?

The Court and County know that by investing in the right hardware and software, we can save resources, if only by enabling simultaneous access to records. As we continue, we will soon find other savings as we work with an original record composed of bits on media making information available to us whenever and wherever we need it.

XI.<u>THE ELECTRONICALLY ENABLED COURTROOM</u>

Let us also think about the court system and courtroom of the electronic future: The litigant files from the computer where the document was created (signing it electronically), gets a receipt copy from the Clerk (verifying transmission) in minutes, gives and receives legal process service electronically, and can view each filing on the day it was filed. The court has enhanced security for sealed, confidential records thanks to computer passwords and encryption. No one waits for a turn with the *one* file. We use "hypertext" to jump between the document we are reading and the legal citation shown in a window on our screen from an electronic law book service.

The computer at the bench gives the Judge many new services and powers. It brings the file, it facilitates legal research, it contains boilerplate for orders and judgments, it receives multimedia information (video, graphics, and sound), it links to outside resources (E-mail, Internet, legal research), and it even allows the Judge to control the lights, temperature, and

equipment in the courtroom. Real-time court reporting and real-time automated minutes further add to the productivity of courtroom personnel.

Since the Court Technology Conference was held in October of 1994, a few judges, court administrators, clerks, and staff from several Washington courts have met and discussed their ideas about "EDI" (Electronic Data Interchange), a term they use to refer to the electronic court file and its consequences. They wrote two statements to express the shared vision they have for the legal system in Washington State. Both appear, below, in APPENDIX 4 (page 17) and APPENDIX 5 (page 18).

The investment today in information infrastructure will bring new capabilities to the bench, court staff, litigants, attorneys, and the public. King County's Court and Clerk are working to create electronic filing here. Other judicial staff and officials want this for all our courts. As more of us learn about and speak up in support of this vision, we will be closer to realizing it in a near, not a distant future.

XIII. ELECTRONIC FILING AND THE LITIGATOR

This section is to help start your thinking about the promise and consequences of the electronic court file.

How will litigation be affected when the Court moves in this direction? The state "EDI" group, the King County Superior Court, and the King County Department of Judicial Administration (the Clerk's Office) want to understand what these changes will mean for everyone involved. The questions below address the potential impacts on litigators and stake-holders. Your participation in answering them will be invaluable.

A. The *pro se*'s (litigants without lawyers):

Can we avoid creating a system which advantages the computer "haves" and penalizes the "have-nots?" Is it enough to hope that the individual who doesn't have computer resources or literacy will readily find help from those who do?

Can we build "smart forms" that help a litigant to complete complex legal forms by answering a series of clearly worded questions, presented on a computer screen, on a computer kiosk at a public place (library, mall), or by support staff from legal support services or a court-sponsored *pro se* resource center? The litigant's answers to the questions would be used by "smart forms" to construct legal filings. Correct paperwork would be the result (in a format that could be electronically filed) and the litigant would get a copy to keep and use.

Can we ensure that *pro se* and represented litigants would profit equitably from remote access enabled by the electronic record?

B.Law Firms

How will electronic filing affect the firm's recovery of costs? Will its cost structure change? Is it more or less expensive to word process documents (with presentation in mind) or to "mark up" documents (with data element identifying in mind)?

What do firms spend on moving hard copy? How much goes to printing and duplication? How much is required to store documents that are duplicates of what is in the court file? How much could be saved in messengers, hard copy delivery, service of legal process, by using electronic files?

Would the average attorney gain time for new or expanded business?

What about savings in the cost of litigation? Would there be savings for the client?

How valuable is it to have access to documents when you want them? How many trips to the courthouse (by messengers, staff, or lawyers) will we save by being able to access information at one's desk at any time?

C.Solo Practitioners

What savings and costs faced by the firm will also be realized by the small office or solo practitioner?

Will solo, *pro bono*, or public service attorneys also realize efficiencies and gains? Will they be able to find resources to acquire necessary equipment, software, and other tools?

D.The "low-tech" or "no-tech" litigator

Where do we leave the person who isn't technical or computer literate, from lack of resources, from lack of training, from temperament, or other causes? Can traditional ways of litigating continue? What activities will be swept away as "outmoded" ways of doing business?

E.The Public

How will the public benefit? Will justice be faster, or even more complex and unfathomable? Will the increased flow of information make us better informed, or more overwhelmed and more hard-pressed than ever to know what is really going on?

What about privacy? Finding private information in today's court files is difficult and time-consuming because it is a hard copy system, but it will be relatively easy to do when records are electronic. Does the ease with which information can be accessed affect our sense of how safe we are from improper intrusion into our privacy?

Many issues need to be raised, discussed, debated, and resolved. The overwhelming amount of paper in our courts forces us to this critical juncture. The opportunity to enable improved judicial processes and decision making by making information more accessible is here. The initial expense will be substantial, but the long-term benefits should be significant.

A change in the medium of the court record is a major step. A change in how we all do our business will be the result. As we think now about the court and the practice of law in the 21st Century, we can expect fundamental shifts. Opportunities or problems? We can work together to ensure gains or we can struggle against change.

We hope you will lend your voice, your insight, and some of your energy to help make sure that the changes which come really promote justice for all.

(517SEA) Winters

You can help in several ways: Take whatever opportunities you have to participate in discussions and focus groups, sharing the best of your thinking and experience. When you have questions, concerns, ideas, criticisms, fears, etc., send them to King County by directing them through me:

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You may also contact:

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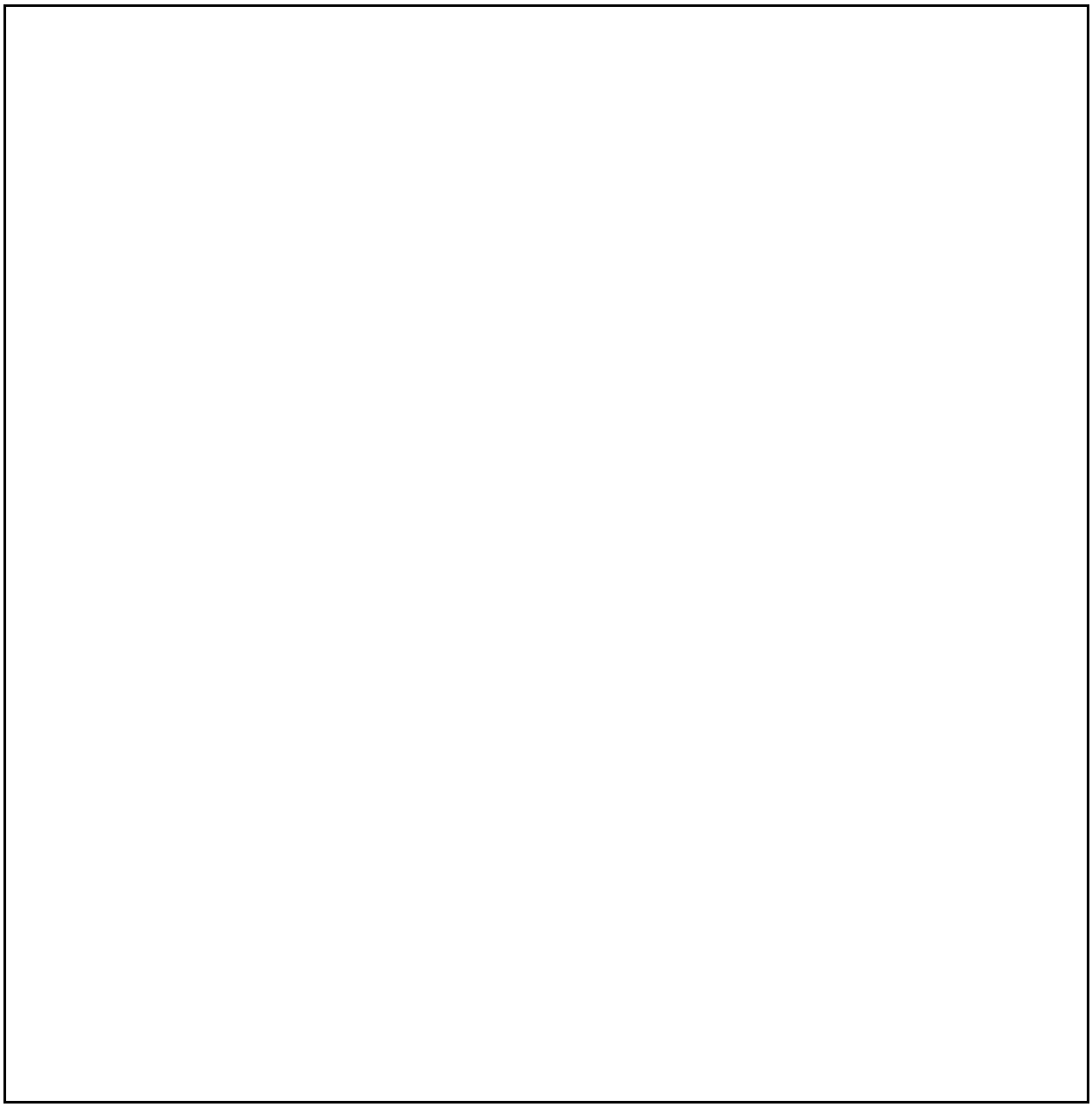
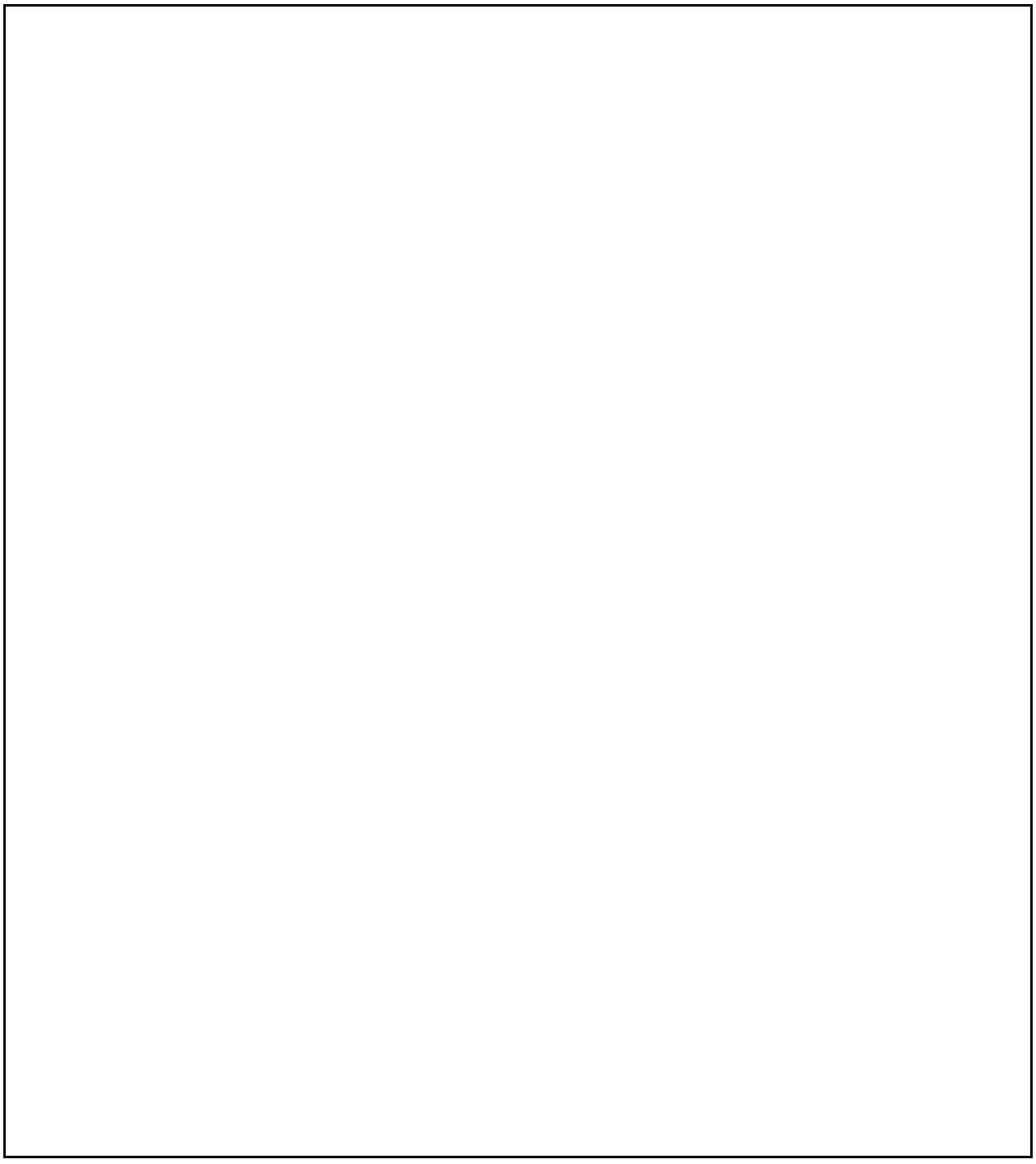
516 Third Avenue, Room E-609 (MS-6C)
Seattle, WA 98104

Thank you!

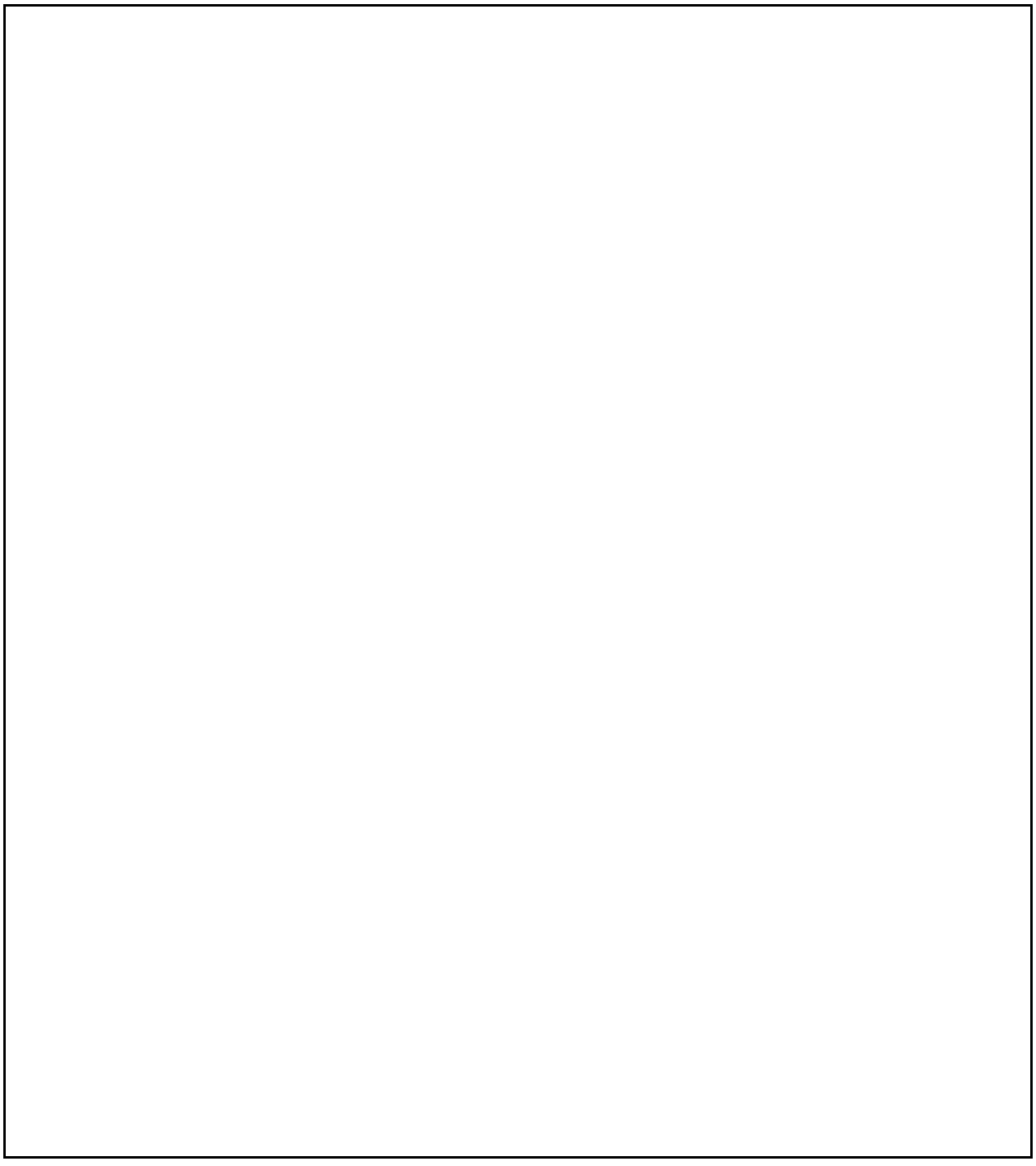
APPENDIX 1: Fax Filing Procedures



APPENDIX 2: Fax Cover Sheet



APPENDIX 3: General Rule 17 (Fax Filing)



(517SEA) Winters

Reengineer Washington's Courts

Rethink, redesign, reengineer our judicial system.

Restructure how courts do their work to deliver better service to customers (litigants and public):

- undertake a zero-based reexamination of court functions,
- reconsider jurisdictional levels,
- remove organizational and hierarchical barriers,
- expedite cases to their earliest feasible completion, with issue identification at entry,
- enable simultaneous processes that avoid delay,
- expedite and manage appeals and revisions, and
- ensure enforcement of judgments, to
- give finality, certainty, and predictability to the judicial process.

Build tomorrow's information infrastructure now

Build a statewide data web, enabling electronic data and document interchange, to make needed information readily accessible to support judicial decision-making and enforcement.

A modernized information infrastructure is necessary to gain maximum benefit from reengineering. Even before reengineering is done, essential features of this infrastructure are discernible:

- a seamless, statewide data web in which all courts and associated agencies share information and data entry,
- electronic data/document interchange, imaging, and multi-media supplanting hard copy as the principal medium for active records,
- judicial information accessible to the court and associated agencies when needed (eliminating organizational and geographic barriers),
- timely access to judicial records available for litigants, the bar, and the public, both in the courthouse and remotely, and
- protection of personal privacy and confidential/sealed information ensured.

APPENDIX 5: State EDI Group's "One-Pager" (3/95)

Toward Electronic Court Files in Washington

APPENDIX 6: The Utah Courts Electronic Filing Design

Toward Paperless Utah Courts

by Alan Asay
Utah Administrative Office of the Courts Information Technology Division
July 7, 1994

[REPRINTED BY PERMISSION OF THE AUTHOR]

The Vision

In its 1991 report, the Utah judiciary's Commission on Justice in the Twenty-first Century prescribed electronic filing of court documents in its short- and long-term goals, stating:

Short Term Goals (1-5 Years)
3. The courts should permit the initiation of any case by electronic filing from remote locations.
....
Long Term Goals (5-10 Years)
1. Records in all courts should be automated and should be electronically retrievable by the bar, other governmental agencies, the public, and the media from remote locations, subject to appropriate protections for privacy, confidentiality and security interests in keeping with existing constitutional and statutory requirements.
2. Imaging systems should replace or supplement present filing systems in all courts of record.
3. The judicial system should move to an essentially "paperless" court.1

With open systems installed, the courts are in a position to begin realizing the vision of a judicial system in which records, including case files, are kept electronically, insofar as practicable.

Electronic files have the following advantages over paper files:

- Computers can **move documents into court** faster and less expensively than paper carrying systems such as the Postal Service or couriers, and with superior security, if privacy-enhanced mail and automatic confirmation are used.

- Computers are faster and less expensive than humans in doing the step-and-fetch work of **document retrieval**, including branching by references from one document to others and from them to still others. Computer programs for displaying text often include hypertext functions enabling a reader to point a mouse at a citation, click the mouse button, and look up the citation, saving the time of pulling paper files and volumes off shelves, flipping pages, then replacing the files and volumes.

- Computers can also **search out relevant passages** better in situations where no citation points the way. Searching by computer for words or phrases has become a widely accepted technique for locating the critical needle in a haystack of text.

- Because computers **copy information** easily and rapidly, they greatly reduce the bother of tracking paper file custody and coping with lost files.

- Because computers communicate with each other well, they enable document retrieval and copying from **remote locations**. Remote access to the court's official case file benefits

1Commission on Justice in the 21st Century, *Doing Utah Justice: A Progress Report to the People of Utah* 33 (1991).

lawyers; an inexpensive, mass-marketed communications link can bring a court's case files onto a lawyer's desktop.

- Computerized documents require **less physical space** to store than paper.

- Computer-readable documents can **interact with other computer-based systems**. For example, a document giving notice of an upcoming hearing could interact with a computerized calendaring system. Documents initiating a criminal or divorce case are often packed with data gathered for demographic or criminal history purposes; in electronic form, such a document could transfer data into a database without human data entry and consequent errors, high cost, and time lags.

- Electronic communications media permit **easy, quick access** to electronic records.

However, the prospect of a paperless court has the following drawbacks:

- **Display technology:** Conventional computer monitors are more limited than paper in display capabilities. Paper ordinarily presents a more fine-grained and larger image than most PC monitors. Display hardware capable of paper's image quality is expensive.

- **Portability:** Paper can go more places more easily than a computer and monitor, even a notebook computer. However, this drawback does not weigh very heavily, because court case files are generally used only on court premises where computers are almost ubiquitous and computer records can be turned into portable paper simply by printing them out. In a way, computerized files are more portable, because they can be transferred to any other computer.

- **Lack of familiarity with computers:** Many users of court records lack familiarity with computers and are not comfortable in using them.

- **Myths of super-paper:** Paper records seem to some people to be more permanent and reliable than electronic records, which may appear more ephemeral because they are copied onto a luminescent screen and into computer memory which depends on power availability. In addition, records stored on magnetic media can be erased or altered without leaving traces of the original. However, erasure and alteration are easy to control, and non-magnetic media can fix the record in a medium as durable as paper. The notion that paper is more durable than computer media boils down to a need to take the management action necessary to assure that computer security, fail-safes, and failure-proofing yield a medium as safe as paper.

The down side is far outweighed by the advantages of electronic filing, but because some of the down-side hurdles can be cleared only by changing entrenched ways of doing business, progress toward a paperless court needs to be gradual. The following three stages can be envisioned:

1. **Electronic filing is an optional alternative to paper filing.** Electronically filed documents are also kept in paper form, and a document or case file can be used in either paper or electronic forms, at the user's option. Electronically filed documents have important advantages over paper filings, so use of the electronic form becomes common and trusted.

2. **All documents are required to be filed in electronic form, and programs for searching and retrieving electronic documents are available.** The document system is fully integrated into the court's case management and legal research systems. The national standards for using and validating electronic signatures are fully implemented. Time rules are reliably calculated based on the date on which a document is electronically filed. Because of its superior utility, the electronic form comes to be more extensively used than the paper form.

3. The general preference for electronic documents has made paper documents redundant, and the reliability of electronic documents is beyond question. The Judicial Council therefore **discontinues the keeping of nonevidentiary court files on paper**, except perhaps in pro se or hardship cases.2

During 1993 and early 1994, the AOC Information Technology Division developed the capability of realizing stage 1, a fully functional, but not mandatory, paperless case file system. Currently, a pilot project is underway with the Salt Lake County Attorney. As soon as the pilot is completed and the electronic filing system is ready for general implementation, others may begin electronically filing court documents.

Recommendation for How a Fully Implemented Electronic Filing System Would Work

The following steps sketch show how case file documents are electronically filed in court and used electronically:

1. The filing attorney's legal **secretary types the court document** using whatever word processor the law office has, and the document is edited until it is in final form.

2. When the document is in final form, it is **marked up** in a prescribed way using Standard Generalized Markup Language (SGML), a standard, vendor-neutral technology for identifying the content of documents. Many over-the-counter software products from companies including WordPerfect, Lotus, and Microsoft are available to make SGML markup easy. The courts will also cooperate with vendors in providing user-friendly, efficient front-ends to the electronic filing system. Two such vendors have already stepped forward; Mead Data Central and Uinta Business Systems have offered to provide front-end packages.

3. The **attorney digitally signs the document**. A digital signature consists of encapsulating the signed text and then applying a distinctive alphanumeric key to it, a key known only to the signer. By applying another key unique to the signer but more widely known than the private key, the court can verify that the signature is genuine, but neither the court nor anyone else without the signer's key can affix or reproduce the electronic signature. Besides authenticating the signer's identity, the electronic signature assures the integrity of the document in transit; in other words, it makes spoliation apparent, including any

2Query whether we may always need to maintain paper filing options for *pro se* litigants. Computers are available at public libraries, but that may not be available enough for Mr. Gideon scrawling a habeas corpus petition. Establishing technological restrictions on access to courts may give rise to problems founded in constitutional law and public policy.

spoliation in transit. The courts will provide basic, public domain software for affixing a digital signature, and vendors will likely provide enhanced signature software as well. Digital signature technology is governed by international standards, so many competing but compatible products exist.

4. The attorney or secretary **electronically mails the document to courtlink**, a central communications computer at AOC. The electronic mail would be addressed to a pseudo-user such as "efiler." The document can be mailed via Internet mail available from many services such as CompuServ, America On-Line, Prodigy, etc. The mail can also be sent by dialing into the Utah Courts Information XChange, the courts' electronic information counter, or it can be mailed from the law office's local electronic mail system, if it is connected to courtlink via a mail gateway or the Internet. The courts use industry-standard mail systems for which gateways are readily available for most mail systems.

5. When **courtlink receives mail** addressed to "efiler,3" it opens it and makes an archival copy on a permanent medium. It then checks to make sure that the document is not a virus or other program. If the document is text, the courts' SGML software checks for required document content, for example, that the document has a case number, parties' names, etc. If required data is not identifiable, either because it is missing or not correctly marked, the document is returned immediately via electronic mail with a message stating that the document contains a critical error and informing the sender of the reason for rejection. If the document appears acceptable to the SGML software, it extracts the data needed for the local court database and creates a document in Folio4 format. It then date- and time-stamps the filing and forwards the extracted data and the Folio document from courtlink to the local court's data server, the machine on which the local court's database resides.

6. The local **data server**:

a. **Updates the local database** using the data extracted from the document. If the data server encounters a critical error (for example, if the document is intended for an existing case but the data server is unable to find a case bearing the same case number and plaintiff's name), then the original document is returned to the sender with an explanation of the error.

B. If the local data server succeeds in filing the document, it notes its success in an e-mail message bound for the filing party. If the document has initiated a new case, the database would also would also note the case number and the judge assignment.

7. The local document server **incorporates the document into the electronic case file**, which includes all of the functionality of a paper case file and more. A reader can highlight or

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3Misaddressed mail would be treated as it usually is in electronic mail systems: it is returned to the sender if the sender can be identified, and if the sender cannot be identified, it is forwarded to a user designated the "postmaster," so that manual inquiries can be made to correct the problem.

4Folio is the courts' choice for document presentation because it is already in extensive use in all Utah courts and would not require less additional software and training. It is also a de facto state standard for text search and presentation and is a high-quality product for which extensive support is readily available.

place notes in the text, without altering the original. A double-click of the mouse on a citation will bring up the cited case statute, or administrative rule. A click on the "Contents" button automatically generates a table of contents of the case file, showing the documents it contains and the headings within those documents.

8. The filing party **is informed by return e-mail of the successful or failed electronic filing**. If the filing failed, the message notes the reasons for failure and suggests corrective action. The message also fully reports all action taken in the court database as a result of the filing. The filing party can also check the court database via XChange to verify filing, and can view or copy the document as filed on the court computer in the second phase of electronic filing, when retrieval software is available,

Completing an entire electronic filing transaction takes about one or two minutes, depending on the speed of the electronic connection to the courts.

After electronic filing, documents could be viewed, copied, printed, or word-searched from any court computer or by users outside the courthouse via the XChange system.5 Automatic links to legal reference documents would also be available from filed documents, if citations follow the Uniform System of Citation ("Bluebook")6 and the local user has access to Utah Law on Disc.7

Going the Full Distance

Electronic filing is almost ready for full implementation. The core system has been operational for about a year, but without the following features:

- **Digital Signatures**:

The courts have not incorporated software to handle digital signatures. Such software is readily available from several reliable sources, and openings were left for its inclusion in the electronic filing system as developed so far.

Legislation and institutional infrastructure need to be put in place to make digital signatures effective and available.

- **Case File**:

5To use the electronic case file from your office, you will need at least the client package of the Folio software that runs the electronic case file.

6The links would be installed automatically by the SGML software, but if the citation is not in Bluebook form, the SGML software will probably not recognize it as a citation.

7Since Utah Law on Disc was selected for purchase by the State of Utah pursuant to a request for proposals and is in widespread use in the Utah judiciary, current plans for electronic filing call for supporting only Utah Law on Disc. Since the Utah judiciary would receive no benefit from supporting other legal research products, including support for them would have to be accomplished without adversely impacting court resources.

Some initial design work has been completed and the existing electronic filing system automatically creates document ready to be added to the case file, but the system needs to be extended so that it appends the incoming document to the appropriate electronic case file. The Folio software also needs to be fully deployed, to make electronic case files available to all users, secure, and usable. The Folio software also needs to print out a copy of the incoming document for the paper case file, as long as the paper case file remains the principal repository of documents in a case.

Completion of these tasks will probably take until the middle of this year. Then, electronic filing will be ready for full implementation.