
ACHIEVING SAVINGS AND EFFICIENCIES THROUGH AUTOMATION AND TECHNOLOGY

Introduction

Use of automation and technology allows the judiciary to handle a continuously growing workload while, at the same time, minimizing overall spending increases and maintaining services to the public. For example, automation has contributed significantly to the judiciary's ability to operate effectively for the past several years at dramatically reduced staffing levels (i.e., about 84 percent of required levels). Absent the benefits of automation, the judiciary would have required a higher staffing level to meet workload demands, or would have compromised seriously the quality of its services.

Numerous initiatives underway offer the potential for a variety of benefits, such as greater judge and staff productivity, better public access to court services and information, more efficient disposition of cases, and lower future year increases for paper, postage, travel, and training costs. These initiatives are in the initial prototype stage; as development progresses, the magnitude of potential savings and efficiencies will become known. In addition to these progressive, large-scale efforts to use technology creatively to improve the way the judiciary conducts its business, dozens of automation projects, large and small, are underway. These efforts are addressed in Chapter 5.

The interim report given to Congress in April 1996 on this topic discussed the judiciary's forward-looking automation management approach and the various technology initiatives currently being implemented to reduce business costs and improve public service. The following section summarizes briefly these efforts. The focus of this final report is on several major new initiatives the judiciary has recently begun exploring for the future, which are discussed beginning on page 59.

Automation Management and Current Technology Efforts

Automation Management

In recent years, the judiciary has initiated new management structures and processes to improve the planning, development, implementation, and evaluation of automation and technology solutions to the courts' operating requirements. In particular, the adoption of a disciplined life-cycle management approach to projects promotes the design and adoption of timely and cost-effective business systems and applications. Information technology projects are monitored and evaluated at every stage—from the original idea to the definition of user requirements; the consideration of alternatives; the design, development, and acquisition of solutions; the testing of new systems; and the deployment and support of systems in the courts. A reliance on user-defined requirements and the provision of effective end-user training programs ensure acceptance and use of new business applications.

Current Technology Efforts

The following initiatives, summarized briefly, were described at greater length in the interim report.

Data Communications Network (DCN). The judiciary is in the final stages of implementing a nationwide communications network linking all of the courts with each other and with the Administrative Office. Near-term dividends include the ability for judges and staff to access and exchange case information, opinions, and other documents within a building, district, circuit, or nationwide with equal ease. Recurring cost saving opportunities have resulted from sharing modems and telephone lines, the use of nationwide network software licenses, and the electronic transmission of text data. Future returns on the judiciary's investment in the DCN will accrue as direct access to centralized databases is increased and additional judiciary-wide applications and systems are completed.

Bankruptcy Noticing Center (BNC). About ninety percent (4 million per month) of the judiciary's bankruptcy notices are now being processed through a central-

ized, automated noticing function instead of being produced manually. This is saving about \$11 million over a four-year period.

Central Violations Bureau (CVB). Document imaging technology is being used in the judiciary's CVB, a unit that serves as a consolidated national district clerk's office by processing and handling the paperwork associated with petty offense cases and misdemeanors. This technology increases staff productivity by significantly reducing the amount of time previously spent manually filing, retrieving, and refiling citation notices and payment cards.

Opinion Retrieval System (ORS). This recently developed system allows court opinions and other documents not submitted to a computer-assisted legal research service to be indexed electronically and retrieved by the court. The ability to access more easily these important records improves judges' and staff productivity.

Computer Assisted Legal Research (CALR). The judiciary makes extensive use of CALR to improve the efficiency of legal research. CALR offers a variety of usefully organized, complete, and up-to-date databases and provides superior search capabilities. These features, together with other functions, make it an invaluable tool for expeditious and thorough research and an outstanding supplement to other legal research resources. The current five-year contracts for CALR services, which were awarded following a competitive procurement, will result in substantial future cost avoidance due to the extremely competitive rates offered by contractors.

New Initiatives to Achieve Future Savings and Efficiencies

Building on these and numerous other past successes, the judiciary currently is exploring a number of new major technology-based initiatives to (1) create better and more efficient ways of communicating; (2) make information and services more accessible to judges, court staff, and the public; and (3) improve the quality and efficiency of courtroom proceedings.

Creating Better and More Efficient Ways of Communicating

Videoconferencing, video training, and computer-based training can reduce the need for people to travel to carry out their business, enabling people who are geographically separated to communicate often and inexpensively.

Videoconferencing. The judiciary currently is evaluating videoconferencing applications for several uses, such as the handling of routine and case-related administrative responsibilities, training, and courtroom proceedings. Videoconferencing in the courtroom is discussed with other courtroom technologies later in this report.

Routine and case-related administrative responsibilities can be handled through the use of desktop videoconferencing. Desktop videoconferencing allows two or more individuals to view and hear each other from a unit that may sit on one's desk, and allows users to share computer applications such as spreadsheets or word-processing tools. It is being explored currently as a means for judges and court staff to handle a variety of activities, including conducting settlement conferences and other case-related activities and carrying out management responsibilities such as discussing reports, planning agendas, and holding meetings. Future applications could include having attorneys meet with judges for conferences and hearings while remaining in their offices, which could help reduce the cost of litigation by reducing travel and waiting time.

In the training arena, videoconferencing technologies offer significant potential for more economical and better training programs for the judiciary. A series of seminars for judges and court staff on legal issues and topics related to court administration is being implemented. Two video seminars have been presented in fiscal year 1996. The first seminar was a satellite broadcast from Washington to over 40 locations around the country; the second seminar was a videoconference using two-way video and two-way voice to locations in 12 cities. Six seminars are planned for fiscal year 1997 and will include at least five satellite broadcasts and one videoconference.

Besides reducing travel costs, this technology makes it possible to provide training to a large, geographically dispersed audience at one time, rather than over several weeks or months, as traditional instructor-led training would require. Further, it minimizes lost judicial officer and staff working time because traveling is avoided, and it results in the delivery of a consistent training program.

Video Training and Computer-Based Training. More and more, videotapes are being used for training and for disseminating information to appellate, district, and bankruptcy courts as well as probation and pretrial services offices on a variety of subjects. For example, the judiciary is converting to a new computer operating system and is using an off-the-shelf video training program for systems staff. This eliminates the expense of developing and delivering instructor-led classes and makes it possible to provide training to the courts at the time the system is installed. Instructor-led training for staff from 275 judiciary locations would have cost the judiciary about \$675,000 in travel and instructor expenses. The cost of the videos, including staff evaluation time as well as reproduction and distribution costs, was approximately \$190,000.

In addition to video training, the judiciary also uses computer-based training to train staff on various automation subjects, personnel regulations, and court programs. For example, the judiciary has developed a computer-based training program to replace an annual nationwide training program for probation and pretrial services office specialists. It would have cost more than \$750,000 for travel and instructor expenses over five years to deliver this training using traditional methods, which will now be avoided. The total development, production, and distribution costs of the computer-based training program were approximately \$274,000.

In addition to direct travel and instructor cost savings, both videotape and computer-based training produce indirect savings through more efficient use of judges' and staff time because they are not traveling. Further, these training media can be more effective than traditional methods because they result in the delivery of a more consistent program and leave the trainee with an interactive reference tool that can be used whenever needed.

In summary, the value of video communication technology is multifold. The judiciary is beginning to avoid significant costs through its use and will continue using it in the future where appropriate to realize additional savings.

Making Information and Services More Accessible to Judges, Court Staff, and the Public

Electronic Case Files. Preliminary efforts are underway to experiment with hardware and software packages to reduce the production and handling of paper documents. This involves exploring the potential of various interoperative capabilities, such as e-mail, full-text searching, and the processing of electronic

forms and images, that would improve the judiciary's ability to process, route, file, retrieve, and share a variety of documents in electronic format. These technologies provide various opportunities for future cost savings and productivity efficiencies in the courtroom, in judges' chambers, and in the clerk's office, as well as savings for the Department of Justice, private attorneys, and parties to cases.

Courts would be able to handle more inquiries more quickly, thereby improving the overall quality of service. Documents filed with the court could be stored electronically and then displayed on workstation screens. This should reduce costs and delays associated with maintaining, retrieving, filing, copying, and disseminating paper documents. Space needed for storage of paper records could be reduced. Available information indicates most courts have or soon will face a critical shortage of file space. Electronic case files would be more accurate, up-to-date, organized, and easy to use than paper records, and they would improve public access to case-related information. In summary, electronic case files have great potential to improve the way courts handle and use documents, thus creating efficiencies for those reviewing case files. These efficiencies may save time and avoid costs for the judiciary. This opportunity is being actively explored.

Electronic Filing. In addition to looking at ways to convert paper documents to electronic form, the judiciary is evaluating the technological possibilities for the filing of cases electronically. The courts could receive pleadings, motions, briefs, and other case-related documents in an electronic form rather than in a paper format. Electronic filing has the potential to move the judiciary toward a "paperless" process, eliminating repetitive, time-consuming manual tasks (retrieval, copying, filing, etc.), and automatically entering vital information into case management systems.

In the Northern District of Ohio, a prototype electronic filing system was developed to handle the maritime asbestos cases. The process makes use of Internet and related technologies. The system not only eliminates the court's massive paper-handling burden for these cases, but also most of the court's data entry and docketing work. At the court's expected rate of 5,000 asbestos case filings annually, the system is estimated to save approximately \$250,000 per year. In addition, this prototype system is paving the way for broader electronic filing applications, which could yield substantial nationwide savings.

Two other courts—the Eastern District of California and the District of New Mexico—have initiated the process of automating bankruptcy case opening procedures. The judiciary is working with commercial vendors to develop software

that will enable attorneys to create electronically case opening documents and that will allow the courts to transfer case opening data to other electronic case management systems.

The enhanced quality of service the federal courts would be able to provide in a less paper intense environment would result in significantly improved information retrieval that more often would be in terms of seconds rather than minutes, hours, or days. Efficiencies would accrue as court personnel handle, transport, and copy physical files less frequently.

More long-term, this technology would allow the public to have expanded access to electronic case documents, such as pleadings, petitions, and schedules. These documents are among the most frequently requested documents from case files. Providing these documents electronically would further reduce the administrative demands on court staff.

Electronic Dissemination of Information. Providing case-related information is part of the mission of each clerk's office in the federal courts. Electronic public access (EPA) to case records saves court staff resources while at the same time permits the public to gain direct, rapid, and easy access to official court records without having to visit the courthouse. For those who do visit the courthouse, public access terminals are available on-site for users to access information without visiting court staff. For off-site users without access to a computer terminal, automated voice response systems allow access to a limited amount of case information directly from the court's database in response to touch-tone telephone inquiries. This service is now operating in bankruptcy and appellate courts.

The judiciary's EPA services have generated increasing demand, both from within the legal community and from other interested parties, such as federal and state agencies, business and non-profit organizations, the press, and the general public. The judiciary expects to complete the installation of electronic public access services in every federal court later this year—presently 95 percent of the jurisdictions offer these services. The expansion and operation of the judiciary's EPA program is self-funded through the collection of public user fees. Further, the judiciary is actively engaged in identifying other methods for providing these services. A series of surveys and focus group meetings have been conducted to this end and work will continue in the future.

Internet/Intranet. In addition to the prototype electronic filing experiments already described, the judiciary is exploring the potential uses and benefits of Internet technologies. The Internet's World Wide Web now is being used to

make available judiciary publications and information to the public. Several publications, as well as decisions for important cases, are currently available on the Internet for global users to read and download as needed. Examples include publications related to judiciary history, updates on issues such as sentencing guidelines and habeas corpus and prison litigation, and decisions in cases of public interest. Internet use reduces the postage, printing, and staff costs needed to respond to information inquiries by mail or telephone, and results in much faster response to the needs of the courts and the public.

The judiciary also is exploring the use of Web technology and software tools to establish a judiciary "Intranet" for publishing and communicating through the judiciary's data communications network (DCN). This will allow the judiciary to publish electronically court directories, manuals, bulletins, and other documents for judiciary users. Electronic publishing using the Intranet and the DCN has the potential to yield substantial savings over the current costs of printing and distributing paper documents and maintaining and updating paper files and shelf documents. When fully implemented, the net savings for printing and postage costs alone is estimated to be about \$1 million a year. Other benefits would be derived as well. For example, countless hours of staff time used to store and later find relevant information would be saved, and the timeliness and quality of data would be improved.

Electronic Bankruptcy Noticing (EBN). The judiciary—working with the Internal Revenue Service, trustees in bankruptcy cases, and large institutional creditors—is seeking to lower the cost of processing bankruptcy case notices. An electronic noticing capability currently is being developed to enable courts to transmit electronic notices to creditors and other parties. Electronic transmission of just 25 percent of the bankruptcy courts' notices is expected to provide the judiciary with approximately \$4 million a year in net savings. Most of these savings will accrue through reduced postage costs.

The bankruptcy courts issue over 55 million notices a year to notify various parties of important bankruptcy case events. Current noticing processes involve copying or printing the notice, addressing or printing envelopes to the proper recipients, folding and stuffing envelopes, and affixing metered postage and depositing the notices in the mail. The Bankruptcy Noticing Center transmits centrally paper notices for 74 courts at this time; the EBN project, now being tested in four courts, will allow the courts to transmit electronically bankruptcy notices to the largest creditors.

Experiments with an electronic noticing prototype currently are being conducted in four bankruptcy courts using value added network and electronic data

interchange technologies. The goal of the court EBN experiments will be to (1) make an assessment of costs, (2) observe court processing activities, and (3) define specific software requirements.

Overall, EBN is expected to be a significantly more efficient and effective way to process the largest volume of notices. The benefits of implementing EBN technology present significant opportunities for sharing existing data, improving the quality of service, and decreasing costs that extend beyond the judiciary into the private sector. EBN would provide large institutional creditors lower bankruptcy notice processing costs because they would not have to manually process hundreds of thousands of paper notices. Additional savings also would accrue because the EBN technology would provide bankruptcy notice information automatically to creditors in a standardized data format that would allow for direct input with automated error correction capability.

Looking toward the future, the judiciary anticipates that investment in this technology would allow for the expansion of electronic services to the public and parties to cases. This same technology can be used for the electronic filing of multiple bankruptcy forms, such as petitions, schedules, and claims.

Improving the Quality and Efficiency of Courtroom Proceedings

Technologies that facilitate and expedite courtroom proceedings are offering the judiciary alternative ways to address growing workloads. Advances in computer, telecommunications, and video technologies, along with decreasing costs due to development of technology in the market place, are increasing opportunities for the judiciary to provide a single, unified system of electronic applications in courtrooms and chambers. The judiciary is working with municipal courts, the Department of Justice, and others to identify and evaluate courtroom technologies, and to provide planning assistance to courts.

Three key activities that take place in the courtroom where technology can help the judiciary conduct its business and improve the quality of service to the public include the presentation of testimony, the presentation of evidence, and the taking of the record.

Within this context, the judiciary is making significant progress toward identifying and studying those technologies that have the potential to reduce the logistical costs of conducting a trial, facilitate the presentation of information, and enhance the comprehension of complex information by jurors and other participants.

Currently, technologies under exploration include videoconferencing, evidence presentation applications, and real-time court reporting systems. These technologies currently are being evaluated in a small number of courts under several different programs. Formal evaluation of the use of these technologies in the courtroom is underway.

Videoconferencing. Videoconferencing can be used to provide live, two-way audio and video transmission between a court and a remote court site or a prison to transmit proceedings to and from the courtroom. It offers opportunities to conduct business without having all participants physically co-located. For example, it provides opportunities to (1) reduce travel costs and (2) reduce security costs and risks by allowing prisoners to participate in courtroom proceedings directly from prison rather than at the courthouse.

Under one program begun in 1991, the judiciary authorized videoconferencing pilot programs in several courts for applications that included prisoner civil rights pretrial proceedings, routine bankruptcy proceedings, and, on a one-time basis, mental competency hearings. Today, two of these pilot courts continue to use videoconferencing for prisoner civil rights pretrial proceedings, and a third continues to use it for bankruptcy applications.

This program has been expanded recently to allow a number of additional courts meeting specific criteria to obtain funding for videoconferencing equipment for prisoner civil rights pretrial proceedings. The total number of courts to be included in this expanded program will be based on funding availability and individual courts' ability to meet the specified criteria.

Exhibit (evidence) Imaging, Retrieval, and Display Technology. The judiciary is exploring the potential for the use of document imaging, retrieval, and display technologies in the courtroom. Document imaging and document cameras are specific technologies that can be used in the courtroom to electronically enhance the presentation and comprehension of complex evidence. The value of these technologies currently is being explored in a number of locations including the District of Arizona, District of Massachusetts, and District of North Dakota courts.

Document imaging technology stores documents as photographs in a computer system for later retrieval without recourse to paper files; retrieval can be as easy as using a barcode pen to select from an index of documents. The judiciary is examining several different applications of this technology. With regard to the presentation of evidence, attorneys can have all the documents needed for a trial

scanned onto a CD-ROM for subsequent quick retrieval and displayed on video monitors placed strategically in the courtroom.

Document cameras can be used effectively in the courtroom to improve the presentation of evidence (documents, photos, three-dimensional objects, x-rays, fingerprints, DNA autorads, transparencies, etc.). Use of this technology allows all courtroom participants (judges, jury, counsel, etc.) and observers (public, media, etc.) to view images concurrently and eliminates the need for time-consuming individual examination of evidence. The technology also allows the presenter to zoom in and highlight the most critical areas of detail. By projecting an image of the object or document, the evidence is protected from rough handling and can be better preserved. The application of this technology allows the presentation of complex evidence to be simplified and clarified by augmenting verbal explanation with visual representation. This can increase retention and recall of trial participants and, perhaps more importantly, jury members.

Real-Time Court Reporting. Real-time court reporting is a technological enhancement to traditional stenotype reporting methods. Real-time reporting permits a stenotype reporter—trained in the use of computer-aided transcription—to produce an unedited transcript version of court proceedings for almost instantaneous (i.e., “real-time”) review by court participants and interested parties in the courtroom. The reporter’s shorthand notes entered into the stenotype machine are translated into their English text equivalent by computer software. The text then is transmitted via telecommunication lines and displayed on monitors or stored on personal computers within the courtroom, such as at the judge’s bench or counsel tables, and can be transmitted to parties outside the courtroom as well.

The instant availability of the court record permits the judge, counsel, and other parties to monitor and review the court proceedings more easily. In circumstances where hearing impaired participants (e.g., a witness, a juror, or counsel) are involved in the proceeding, such individuals can more easily participate by reading the real-time record on computer monitors.

As an additional component of real-time court reporting, court transcript annotation enables the judge and participating counsel to display, capture, and annotate the real-time transcript. It allows courtroom participants to view the testimony on a computer screen and, if desired, make personal notes and mark text in any portion of the electronically captured testimony within seconds. The judge or counsel can also review new or previously recorded testimony and use various sophisticated text retrieval software tools to locate key words and phrases.

This technology also provides flexibility in the transporting and sharing of the oftentimes voluminous record with legal team members or other court staff. It has the added advantage of allowing counsel to electronically integrate testimony into their litigation support systems. Most of the equipment costs of real-time court reporting are borne by the court reporter; by statute, court reporters are required to bear the costs of producing the transcript.

At its September 1994 session, the Judicial Conference endorsed the use of real-time court reporting technologies in the district courts to the extent that funding is available to support their use. The Judicial Conference Committee on Automation and Technology formally adopted technical standards for these technologies at its June 1996 session.

In summary, the judiciary is firmly committed to exploring the potential of expanded use of information technology in the courtroom. These efforts can produce cost savings and efficiencies by significantly facilitating the conduct of judicial proceedings.

Conclusion

The judiciary has a proven track record for successfully exploring and employing technology-based initiatives to enhance productivity and improve access to information. The new initiatives currently being examined, combined with the judiciary's strong management focus on information technology improvements, signal that the judiciary's past successes will continue. Seeking out the power of emerging technologies and strategically integrating them into judicial work processes is one of the judiciary's highest priorities. The judiciary is committed not only to refining and making existing processes work better, but to creating new ways of working that are more productive, efficient, and effective, and that will enable the courts to deliver better service to the public at lower cost.