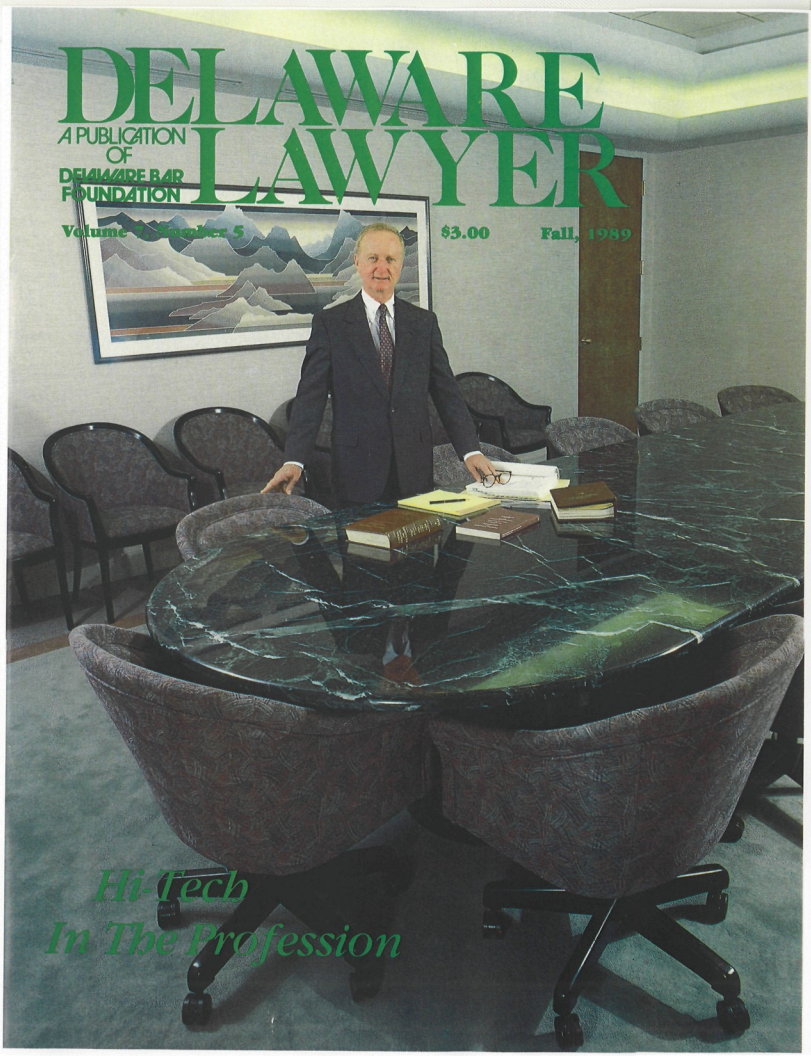
DELAWARE LAWYER

A PUBLICATION OF DELAWARE BAR FOUNDATION

Volume 7 Number 5 $3.00 Fall, 1989



Hi-Tech In The Profession

Talk to us first.

Wilmington Trust, ranked among the nation's largest personal trust institutions, maintains a fully staffed, full-service office in Stuart, Florida. We're knowledgeable in the intricacies of Florida probate. We know the procedures for establishing Florida domicile and can help discuss them with your clients. We can continue to offer the quality personal trust, estate and investment services that your clients are using in Delaware. If they're also maintaining a northern address, we can coordinate with you and your client to provide an excellent combination of services—yours and ours. Suddenly, 1,500 miles may seem like a very short distance.

WILMINGTON TRUST
OF FLORIDA, N.A.

To find out how we can help you continue your relationship with your clients who are moving to Florida, call me, Doug Poulter, President, (407) 286-3686. Or write: Suite 144, 900 East Ocean Boulevard, Stuart, Florida 34994

"Some sound advice regarding your clients who are moving to Florida..."

Doug Poulter, President

Does your Title Insurance underwriter do anything besides supplying forms and collecting the premium?

THERE'S ONE THAT DOES ►

All the reassurance a family doctor gives.

And a family of specialists.

Keeping you and your family healthy. It starts with the family doctor you choose at The HMO of Delaware. And continues with a family of specialists.

First, your nurse practitioner, working with your doctor, takes extra time to answer questions and to follow up if you're ill. And your HMO pediatrician, gynecologist, optometrist, radiologist, and other HMO staff are all together at The HMO. Ready to help when you need them. If you're out of town, your care continues through the HMO-USA network. And The HMO covers emergencies.

Finally, The HMO, a BlueMax choice, provides Blue Cross Blue Shield coverage for authorized hospital and surgical expenses.

To find out more about The HMO, call 421-BLUE for a free brochure.

HMO® THE HMO OF DELAWARE, INC.

Everything a family doctor gives you and much more.

Blue Cross Blue Shield of Delaware

Brandywine Health Care Center, North Wilmington

Christiana Health Care Center, Stanton

DELAWARE LAWYER
A PUBLICATION OF DELAWARE BAR FOUNDATION
VOL. 7 NO. 5
FALL 1989

706 MARKET STREET MALL • WILMINGTON, DELAWARE 19801 (302)658-5278

TABLE OF CONTENTS

COVER: It is entirely fitting that the cover of an issue of this publication emphasizing "Hi-Tech" in the profession should display the photograph of the well appointed conference room of a law partnership that relies heavily upon such office supports. Thanks are also due Henry N. Herndon, Jr, Esquire for adding animation to a scene that otherwise would have been a mere still life.

Cover photography: Eric Crossan, Crossan Studio

DELAWARE LAWYER
A publication of
Delaware Bar Foundation
Volume 7 Number 5
September 1989
706 Market Street Mall
Wilmington, Delaware 19801
(302) 658-5278

Address Changes, Subscription Orders, and Editorial inquiries should be directed to:

DELAWARE LAWYER
Delaware Bar Foundation
706 Market Street Mall
Wilmington, Delaware 19801
(302) 658-5278

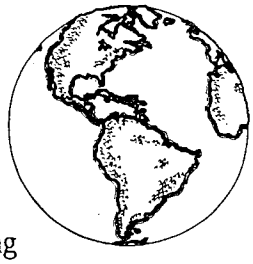
Requests for information about Advertising should be directed to:
T.T. & Associates, Inc.
1220 VAlley Forge Road
Box 911
Valley Forge, Pennsylvania 19481
(215) 933-4741

DELAWARE LAWYER is published by Delaware Bar Foundation as part of its commitment to publish and distribute addresses, reports, treatises and other literary works on legal subjects of general interest to Delaware judges, lawyers and the community at large. As it is one of the objectives of *DELAWARE LAWYER* to be a forum for the free expression and interchange of ideas, the opinions and positions stated in signed material are those of the the authors and not by the fact of publication, necessarily those of Delaware Bar Foundation or *DELAWARE LAWYER*. All manuscripts are carefully considered by the Board of Editors. Material accepted for publication becomes the property of Delaware Bar Foundation. Contributing authors are requested and expected to disclose any financial, economic or professional interests of affiliations that may have influenced positions taken or advocated in the articles. That they have done so is an implied representation by each author.

SOLUTIONS TO INSURANCE CLAIMS AND INVESTIGATIONS THAT WORK.

A FULL SERVICE AGENCY...

S & H Enterprises is an experienced and trusted investigating firm with associates and contacts around the world. S & H is linked worldwide with associate investigators and attorneys via TELEX and TELEFAX. Hard copy reports are in the hands of attorneys and clients minutes after completion. S & H has an impressive track record for getting the desired results in all types of investigations.

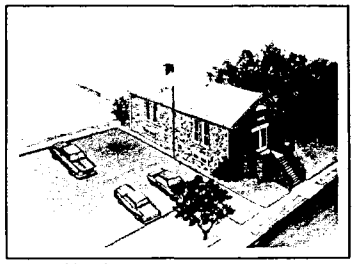


HI-TECH EQUIPMENT...

We have the tools and expertise to solve problems involving workers' compensation, employment verification, missing persons, heirs, witnesses, skips, surveillance, false insurance claims, character checks and confirmation, voice identification, employment investigations, fire investigations, assets searches, database researches, interrogation, and statements.

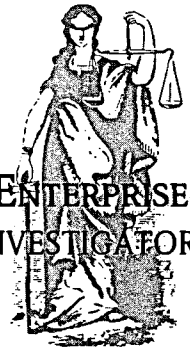
INVESTIGATIVE SPECIALISTS...

President John E. Slagowski is a highly-experienced former insurance adjustor. He brings a wealth of practical experience to cases, as well as professional instincts and ethical values. His in-depth understanding of insurance principles *— combined with an arsenal of hi-tech investigation equipment* — assures effective solutions.



Headquarters - Newport, Delaware

For information on methods of operations, cost and scheduling, please call
302-999-9911 (in Delaware) or
800-446-9911 (out of state).



S & H ENTERPRISES, INC.
INVESTIGATORS

Main Office: 205 N. Marshall Street • P.O. Box 12245 • Wilmington, DE 19850
Other Locations: Dover • Maryland • Pennsylvania

FROM THE EDITOR

Legal education at Widener University School of Law is visibly changed by technology. Automation impacts all phases of the Widener University School of Law operations from teaching to administration. If the proliferation of related articles in legal newspapers and journals is an accurate barometer, the same can be said for the practice of law in firms throughout the country. The law office marketplace abounds with new products and expanded applications of existing technologies. In some jurisdictions, personal computers appear at both judges and counsels' tables while in others legal documents, including complaints and motions, are accepted by telefacsimile (fax) transmission by the courts. The continuing trend towards megafirms and law office branches is facilitated by expanded capabilities provided by automation.

Legal information is in the midst of a dramatic transformation. Some futurists predict that the legal information center of the future will be paperless. We are witnessing a change in the way research is conducted. Electronic information retrieval coexists along with traditional research tools. Students are instructed in both. To prepare students for the practice of law in the 21st century, a commitment was made at the Law School to provide state of the art legal technological resources including interactive video, CD-ROM, personal computers, satellite dishes dumb terminals, optical scanners, character generators and telefacsimile equipment. Technology has made a marked difference in our resources.

An offer to contribute an article on the impact of automation at the law school resulted in an invitation by Bill Wiggin to be *Delaware Lawyer* guest editor for an issue devoted to high tech law in Delaware. This issue is designed to explore how technology impacts the practice of law and legal education in the state — in the courts, in firms both large and small, and in the law school. It is an opportunity to view existing applications as well as to peer into the future and explore potential innovations.

Eileen Cooper

A CHANGE OF THE GUARD

In the Spring of 1982 the first issue of this publication appeared. From that date until the present *Delaware Lawyer* has been guided, to its immense benefit, by the editorial skill of William E. Wiggin. Bill has now decided that the time has come for him to concentrate upon the business management of the magazine. Happily, his association with it continues. His advice and an occasional snippet for publication remain available to his successor. We offer our readers the assurance that full advantage will be taken of this resource.

There will undoubtedly be a change of style which readers will soon notice. That is inevitable. What your new editor intends to maintain to the best of his ability are the standards of content and prose set by his predecessor. Poetry, by the way, is not excluded so long as the levels of quality and content are preserved.

Those standards were described in Volume 1, Number 1. "A primary object of *Delaware Lawyer* will be accessibility to the intelligent general reader... We shall aim at correct usage, decent grammar, and unpretentious clarity."

These remain our goals. How well we succeed will be for our readers to judge.

Carroll F. Poole

When your career has taken off, you need someone to help keep both feet planted firmly on the ground.

It's been a long time coming, but you have finally arrived. You beat out the competition and made your own way.

As a result of your accomplishments, you have acquired a degree of affluence at the cost of precious time. So to protect your interests, you need someone to manage your money.

Someone who will not only handle your immediate banking needs, but who can orchestrate your entire financial future.

Someone who will be there when you need him.

What you need is a private banker.

At Delaware Trust, our Private Banking Officers provide distinguished clients with banking attention beyond the ordinary. They are seasoned professionals available to handle your financial needs 24-hours a day; over the phone, at your office, or wherever you happen to be.

Your private banker will become completely familiar with your financial situation and long-term objectives. Additionally, he'll provide immediate and confidential access to a blend of financial services tailored to your personal needs for a lifetime financial plan.

You've come a long way and Delaware Trust wants to help take you even further.

For more information regarding Private Banking, call F. Samuel Wilcox, III, Senior Vice President, Private Banking Division at **421-7450**.

DELAWARE TRUST

Member FDIC

LEGAL EDUCATION IN THE AGE OF TECHNOLOGY

Eileen Cooper

To appreciate how technology has impacted on legal education it is useful to compare it to the "olden days." Flash back with us to your days in law school:

In class you stand intimidated before a solemn faced inquisitor who is grilling you on the nuances of *Marybury vs. Madison* in the best tradition of the Socratic Dialogue. After class, you spend the best hours of your life digging through musty tomes in the library trying to find applicable precedents. Later in the semester, your spelling and your two fingered pecking on the ancient Smith-Corona are major obstacles to completing a paper. Two days before the exam, you are wishing you had taken better notes in torts class. You need to refresh your knowledge and your notes don't help much. And, after graduation, you get a job. You feel panic before meeting your very first client. After "good morning" what will you say? For all your studying you are not prepared to actually *practice law.*

Like most parts of our culture, legal education has been impacted by the technology revolution. While not *everything* about law school has changed the microchip has transformed many things from the way you remember. Widener University School of Law has been aggressive in taking advantage of innovations. The law school is representative of those institutions on the leading edge of utilizing technology in support of legal education. The electronic revolution brings benefits to students still on campus. It also brings benefits to the practicing attorney. The purpose of this article is to describe some of the changes and their benefits.

THE CLASSROOM: MORE VITAL WITH VIDEO VENUE

To get a feel for the changes in legal education since your days on campus, come on a personal tour of the Widener Law School.

It's a lovely fall day, just a week before Thanksgiving break. Students rush past. You follow several into class and settle into a seat in the back of the room. While listening to the professor, you recognize that this is a course on evidence. He told that same joke when you took the course! Your attention wanders. (It did when you took this course the first time, too.) At first glance, the room appears to be arranged as you remember. Seats are attached in tiers facing the front, but a closer inspection reveals some changes. You notice: smoked domes suspended from the ceiling and video monitors, bracketed overhead. Then the professor stops talking. What's this? He is using a video tape as part of his lecture today. It is run on monitors in the classroom by a technician working in a central studio elsewhere in the building. The students are attentive. As the screen flickers to life you recognize Irving Younger, the national expert, who makes several important points about the effective application of the hearsay rule. His examples and breadth of knowledge supplements the professor's presentation. His jokes are better than the prof's too!

When the tape is over, several students ask questions. An interesting discussion follows. Toward the end of the class, the professor asks students to watch another tape. This one was filmed last semester in the moot courtroom down the hall. In the brief segment, students are to analyze the mock trial and identify which rules of evidence apply. It's a quiz. One thing has not changed from your days in school: a quiz is not popular. You hear groans from several students sitting near you.

Every classroom, plus the trial advocacy and moot court rooms at Widener Law School, is wired into an advanced video taping and play-back studio. Taping is done through cameras protected by smoke-colored domes which can sweep the room. Tapes are played back on monitors to large groups. Individual viewing stations are also available. In addition to tapes produced at the school, several hundred video tapes including those produced by the National Institute of Trial Advocacy are available. These videotapes cover a wide variety of law fields and law-related issues.

Video presentations are used in many ways in modern legal education. They are used to enhance courses from environmental law to alternative dispute resolutions. Students view trial excerpts as part of exams. One of the most powerful uses of video equipment is for self critique by students. The law school offers many innovative programs using the power of the "instant replay." The two most prominent are the Intensive Trial Advocacy Program (ITAP) and Inns of Court.

In ITAP, attorneys from around the country come to the campus to serve as judges. Students conduct simulated trials and are scored by the judges on their trial effectiveness. Tapes are used by students to replay and analyze their performance to improve their advocacy skills.

The Inns of Court Program is dedicated to improving American trial advocacy in an atmosphere of collegiality modeled loosely after the venerable English Inns of Court. Begun by U. S. Supreme Court Chief Justice Burger a decade ago, this monthly series of meetings gives students an opportunity to tap legal acumen only years of experience can supply. This program brings together judges, experienced litigators law professors and students. Third year students apply to be part of this national program. If accepted, they are invited to attend a series of sessions held at the law school.

Each session of the Inns of Court focuses on a particular aspect of a trial and is videotaped. The focus of the meeting may be to demonstrate the cross-examination of a witness, the giving of a closing or opening statement to the jury, voire dire or some other segment of a case. The men and women of the panel bring special insight about preparing for, presenting and ruling on cases. Each meeting is followed by an informal dinner to promote a free exchange of ideas amongst all participants. The tapes are available to students for further study.

Underlying the use of video tape in the ITAP and the Inns of Court experiences is a changed philosophy about preparing students. In the past, graduates knew something of the legal system and precedents in the most commonly used areas. Usually, however, students finished law school ill equipped to try law suits, negotiate a settlement or draft legal documents. The legal education

community is now striving to make the curriculum more complete. A much greater emphasis is put on gaining experience while still in school. Through a variety of experiences such as those described above, students are preparing to handle an attorney's responsibilities more effectively.

THE LIBRARY: NOT JUST A BOOKERY

Continue with us on the imaginary tour of the Widener Law School campus of today.

You enter the Law Library for the first time in years. At first it seems to be orderly shelves of books and periodicals. There are quiet tables of men and women referring to stacks of volumes in front of them and scribbling notes. It's just like you remember from your student days. As you roam through the stacks you do begin to notice changes. You come to a door marked "CALR Lab." You stop to investigate. Students are sitting front of computer terminals tapping the keys and watching changes on the screen. Curious, you step closer and look over one student's shoulder. You are getting a glimpse into legal research in the Information Age.

Computer Assisted Legal Research (CALR) is faster and often more effective than the manual methods with which you were trained. Skill in computer assisted research is considered so important in legal education today that every student must complete a CALR training program as part of the first year curriculum.

Faculty and students at Widener's School of Law have access to the two national legal databases. LEXIS was created and is maintained by Mead Data Central, and Westlaw is the on-line database of West Publishing. Faculty have access to both LEXIS and Westlaw from their offices or homes. The content of the LEXIS and Westlaw databases is tremendous and continues to expand. Exhaustive coverage is now available in many subject areas including securities, bankruptcy, tax, health, insurance and patent law. Full text searching is available for both state and federal cases, statutes, administrative law, treatises and many law reviews.

The on-line cost of CALR can be prohibitive if used inefficiently. Developing Compact Disc Read-Only (CD) technology may prove a more cost effective alternative. The CD with its large storage capacity, offers the ability to access a large database of information with great speed and accuracy without incurring on-line charges.

A recently introduced, full text CD library by West Publishing incorporates some very significant enhancements. Its on-line interface with Westlaw enables the research to shift to on-line research from the CD database for up-to-the-minute information. In addition, it has "windowing" capabilities, *i.e.*, the full text of footnoted citation may be brought up on screen while the researcher is viewing another document. cost savings are realized versus using just CALR since no incremental costs are incurred until the researcher goes on-line. Presently four subjects are available: taxation, bankruptcy, federal civil practice and government contracts. The only hardware required is a PC with a modem connected to a CD ROM drive.

Legal research is a primary use for the computers but the PC Lab provides additional enhancements to legal education. Word processing programs are popular for course outlining, brief writing, law review articles, seminar papers and complaint drafting.

Now back to the tour. After watching the first student track down precedents for a law review article, you move along. It sure looks easier than the way you are doing it. You'll have to find out how much of this stuff you can use in your practice. At another computer, a student is reading text, answering questions, and jotting on what appear to be class notes. She looks up, and you ask what she is doing.

"Reviewing torts," she replies.

"On the computer?" you ask.

"Sure. I took the course last year, and went back to review my notes. I guess they're not as complete as they should be. This review course on the computer is a good refresher. I'm filling in my notes so I can study over the break."

Computer Assisted Legal Instruction (CALI) gives modern day law students advantages over what you had. Unlike CALR which is used for legal research, these software programs developed under the auspices of the American Association of Law Schools are computer software programs used for education purposes. Torts, debtor/creditor relations and at least twenty-five other subjects are available. The CALI programs are used to reinforce, supplement and expand upon subjects in a wide variety of legal subjects.

The CALI programs are available on the computers in the PC Lab. They can be used at the time and pace which best suits the students. As you can imagine, they are very popular around finals. they are also available to you, as a practicing attorney. Have a case in labor law, the commercial code, or insurance law which you have not touched since school? Come to the PC Lab at the Law Library and use CALI to brush up The courses are easy to use quick and effective.

You take one last look around the PC Lab. All this computer stuff. Then you spot one young man who appears to be watching TV. The scene on the screen shows a court room.

"Ah," you think. "One student fallen victim to boredom. He has decided to watch Judge Wapner and claim he is studying."

All of a sudden the student types on the keyboard. There is a printed message on the screen instead of the film. Curiosity gets you. You stroll down to find out more.

One of the most "gee whiz" instructional tools used today is produced by Veralex. Interactive video, a technology developed over the last decade utilizes a computer and video disk.

The video is shown on the screen. But instead of having to watch the sequence straight through, the computer can take in reactions from the viewer, and will move the viewer to another section of the action.

The Veralex (a subsidiary of Lawyers Cooperative Publishing Company) programs were developed by Harvard Law School. Interactive video lessons help students practice application of the rules of evidence and negotiation. The video shows a trial. The student should object when rules of evidence apply. If the correct objection is made at the correct time, the video moves on to the next section of the testimony. If the student does not react, or objects incorrectly, the video may move to an explanation of the rule which applies instead of to a scolding from the judge.

Another "gee whiz" use of technology is a valuable aid to any patron of the library researching a legal or general issue. LegalTrac and InfoTrac use CD technologies for data storage and retrieval. They index nearly 2000 legal, business and general periodicals and newspapers. the CD's are updated monthly. Many of the LegalTrac/InfoTrac cited periodicals are available at Widener's Law School Library. A patron can identify articles of interest, then read them the same day.

There are more changes in the Law Library than you had initially realized. You walk back through the facilities taking an inventory of what's new and what's as you remember it.

There are still stacks of books and periodicals. And there are tables with groups of students reading and taking notes.

There is a circulation desk, with several smiling librarians talking with students. This section looks empty, somehow. What's missing! The card catalog!

Yes, the card catalog has disappeared. It's also been replaced by an innovation of the Information Age: LAWCAT, our on-line catalog of all the books and periodicals the library owns. You can use it as you would have used the old fashioned card files. But, it provides you much more information faster. At a glance, you can tell that the book you want is in the library's collection. You can also get up-to-the-minute information on whether it's checked out. You can tell which issue of a periodical is the most current, and when the next one is due. The Widener Law School libraries at Harrisburg and Wilmington are connected into the same catalog, so you have immediate information about resources in both locations. If the item you want is at the other facility, the librarian can have it telefaxed or sent that same day.

If the library does not own a copy of a book or periodical, don't get discouraged. Both the Harrisburg and Wilmington facilities are connected to two other resources which can help. The On-line Computer Library Center (OCLC) data base is one. With a few key strokes, the librarian can tap this international catalog network. With the information she can help arrange the purchase or inter-library loan of the item for you.

A mailing was sent to all Delaware Bar Association members from the Law Library at the Widener Law School. In the brochure sent to your office, instructions explained how to dial into the LAWCAT network. If that brochure has been misplaced call 478-3000 and another will be sent.

Widener University School of Law is proud to be one of the most advanced in the nation in using technology to provide excellence in legal education. The knowledge and services we provide to students, faculty and practicing attorneys help keep the legal standards of the region high.

We invite you to get to know more about how technology can help you be effective. come, take a real tour. Find out how we can support you and the legal profession in the tri-state area.

The author gratefully acknowledges the assistance of I. Gail Howard, Principal, Howard and Associates Consulting Services.

Eileen B. Cooper is Director of the Widener University School of Law Library. She is a graduate of the law school and is a member of the Pennsylvania Bar and associate member of the Delaware Bar. She was responsible for planning and designing the newly completed Widener School of Law Harrisburg library. Technology provided the key for complete integration between the Delaware and Harrisburg campuses.

INTRODUCTION TO THE WORLD OF COMPUTERS — A MEMORABLE ADVENTURE

Thomas H. Carnwath

I had every good intention of submitting an article for this issue of *Delaware Lawyer* which portrayed the fear and loathing displayed by most novices when confronted with a new computer system. I wanted to describe the intense discomfort one experiences when setting up the system, and to provide various exhibits detailing the need for literacy training. My next objective was to convince the reader that all the worries in the world could be put aside as mastery of technological skills become second nature.

That was my intention. As you might have surmised, I am a novice, unaccustomed to dealing with my own database, word processor, fonts, spreadsheets, and disk operating systems. I make no truck with those who breeze through their little PC/XT/Model 30 worlds content to be their own masters of universes so alien to me that my fountain pen quivers at the mere mention of retirement. I was born fifty years too late.

I revel in desk blotters, my Mont Blanc Diplomat, and all the accoutrements of a bygone era. Let me thumb through the pages of a book, dog-eared though it may be, for the information on a particular subject. A library card, not a personal password into a labyrinth of disk-driven databases, is a thing of beauty to me.

It was from my world that I was cast out into the callous, all consuming world of the desktop computer user. It was for my own good, I was told. Training would simplify office procedures. Everyone, even your own children, is computer literate. So.....

Disk Error, Cannot Recover Data

It is rather superfluous to pronounce this the age of high technology. Computers abound, here and abroad. We talk to computerized receptionists, order that perfect piece of sporting equipment through shop-at-home services. So pervasive is the computer in today's society that one is faced with ridicule and derision for not being up to speed, compatible, or batched.

As more and more colleagues began "booting up" their ASCii files, I began to realize that no longer was it possible for computerization to remain a topic of complete indifference for me. I, too, would need to overcome my fear of a machine that actually would talk back to me mockingly, and so my saga of taking the "bit" by the horns, one "byte" at a time was executed.

The year was 1981. The challenge: IBM PC, dual disk drive with Hercules Graphics card, and a box of ten-count, double density, double sided floppies, all hooked (interfaced) to a NEC 3500 high density, letter quality printer. My surge suppressor at the ready, to protect my machine from the whimsies of a Delmarva brownout; my software (Volkswriter Word and antiquated by today's standards) manual at the title page; the world at my fingers I plunged headlong into the tutorial.

Power on. Beam me up Scotty. I felt in command of my element. But nothing happened. Referring to the trusty manual, written in a language only a nerd might comprehend, I spent the next hour trying to determine what it was I should be doing to get anything to appear on my blank screen. Tucked away in the back of the binder were some quaint instructions on double-checking your equipment. Glancing through the problems to identify to the solutions, I discovered: "Be certain to adjust contrast for screen to alter brightness." Find the knob, turning slightly, and, aha!, there was my first command: Error in reading Disk Operating System. This would not be easy.

I finally figured out to boot up and install the guts of any computer - DOS. I slowly realized that one could not use those floppies without first Formatting (Do you want to format another? Y/N). Back to the tutorial, I was instructed to "Insert Disk marked TUTORIAL into Drive B. Insert Backup Disk into Drive A. Well the DOS Disk was already there with plenty of free space, Why bother? Scrolling through the world of Volkswriter was a dream, even for a two-fingered keyboarder. Wordsmithing, something we all get paid to do in one form or another, would become faster and less complex. The benefits of the system would far outweigh the cumbersome approach I had heretofore called routine - longhand with a fountain pen. It was as if I had been using a quill, or so I was led to believe.

I raced through the tutorial, skipping over much, concentrating on what I thought would carry me through as I was eager to begin a major project requiring reams of paperwork. The computer was to save time and assist in meeting the deadline. Along the way I seem to have missed some critical instructions which would have saved me the doom I was about to experience.

Days passed into weeks and I was clipping along at a reasonable pace with the all important draft. Revisions were becoming easier as I mastered the art of redlining. Footnotes were merely a keystroke or two away from my nimble fingers (all two of them and an occasional thumb). Moving, blocking, text in/text out, merges, and macros were easing the tedious editing process of a document now containing over 100 pages of text, charts, and appendices. Spell check was a godsend as my machine whirred along correcting all those little typos that previously were relegated to "white out". It was December, the seventh, when I discovered that Hell hath no fury like that of a computer sitting in wait for its next unsuspecting prey.

I had been doing all the work myself. My secretary, as dedicated an individual as there was, had been relegated to the mundane office procedures as I concentrated on the creativity my little Big Blue office automaton had afforded me. The printer was primed and I was ready to view, in hard copy, the draft that had consumed so much of my time these past several weeks. SHIFT F7 (the execute command for the print mode). Nothing.

What was amiss?

I shortly was to discover that all my efforts were in vain to retrieve the document that had so commanded my time for the last several months. Nothing I said to the machine or those unsympathetic cretins in "Administrative Support Services" (an appendage of the Computer Center) was understood. I cried. I laughed. I cursed vehemently. All to no useful purpose. My draft was afloat in some greater "buffer" within the box in front of me. As help arrived, I was soon to discover the error of my ways. (No, it was not attempting this insanity in the first place!)

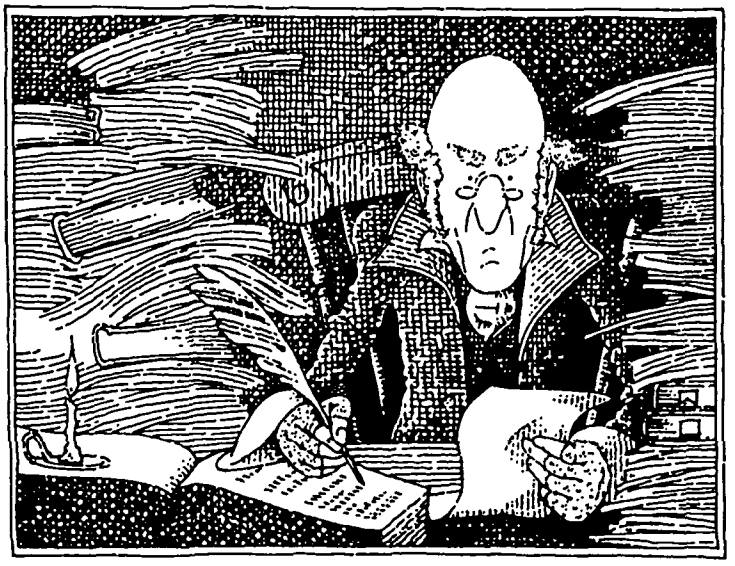
In my haste to conquer the system, I had made several critical mistakes. The DOS diskette should never be used for storing routine files. Never smoke in front of your computer. (You may have seen the inside of mine which is still on display in the Computer Center as an example of how not to treat your special machine.) Never assume that by hitting the highlights you have mastered anything close to understanding even the most simple of software packages.

I had managed to do the "impossible". How I erased my DOS disk is still a complete mystery to me today. In addition to loosing the guts of my software, I had also managed to loose every piece of creative writing that I had labored over for the past month. Laughter was heard throughout the halls of the Computer Center. Had I heard of that old family retainer **Norton Utilities**, I would have relieved myself of the humiliation of becoming the brunt of so many harmless jokes and snickers.

So that was then and now is now. I have finally mastered the art of **WordPerfect 5.0**. Thousands, millions of bytes, have crossed nimbly from my two fingers (and an occasional thumb) through the heart of my PC, which has been upgraded several times since 1981. But there are new horrors awaiting me. I have been instructed to learn several new database software packages that will allow me to conduct business in a more professional manner.

Here I go again. This time, at least, I have my copy of **Norton** and the sense to go through both the manual and the tutorial before tackling the really important stuff.

From the time of his graduation from Albion College in 1973, Thomas H. Carnwath has been active as a fund raiser and administrator for non-profit organizations. In addition to Widener University, with which he has been connected since 1976, he had been Deputy Director of Developmnent and Public Affairs at Hagley Museum and Library from February 1987 through December 1988. He then returned to Widener as Assistant to the President, serving on a wide array of committees dealing with institutional issues and as the President's Liaison with the Board of Trustees. His adventures at the time of his initial exposure to those daunting devices known to us generically as "computers" will strike a familiar note for many of us.



Is your escrow account system more 1889 than 1989?

If the escrow account system in your real estate or law firm hasn't changed for as long as you can remember, here's some good news.

Bank of Delaware's new Escrow Account System is specifically designed to save your firm a significant amount of time and money. Enough to make you wonder how you managed any other way.

The new account is based on a one statement system. By using one master checking account, individual escrow money market accounts are opened in the name of each of your escrow clients. And your single monthly statement – detailing the activity on each individual account – all but eliminates escrow bookkeeping.

Day-to-day transactions can be handled over the phone or by courier delivery. At year end, 1099 forms are mailed directly to your clients, not you. The system is automated to ensure the highest degree of accuracy. Plus, each individual account is FDIC insured up to $100,000.

For more details, call 429-7130 in New Castle County; 1-800-292-9603 in Kent and Sussex Counties or visit any one of our convenient branch locations.

BANK OF DELAWARE℠

Delaware's Bank

Member FDIC

Delawareness

ONLY FROM DELAWARE'S BANK

THE LAWYER'S GUIDE TO LAW OFFICE COMPUTERIZATION

(in one sitting)

Richard K. Herrmann

Many of us are intimidated by those things we do not understand. And computers can be very intimidating. However, this is not because computers are so mystifying. To the contrary, they are nothing more than a brilliantly conceived form of office equipment that can be used to lessen the cost of operation, increase efficiency and productivity, and net revenues.

Many may find computers so overpowering because they will not take the time from productive hours to become educated as to their use in our law office environment. Those lawyers who have been exposed to product liability law quickly become experts in many different fields and acquire a working knowledge of many different products. There is no question that an attorney who had to try a computer case would not hesitate to take the time, at his regular hourly rate, to learn all there is to know about computers.

The fact that there is no client to foot the bill for the learning experience is no reason to continue taking the "ostrich" approach to present technology. The issue is the same; it is the bottom line. It will not take long for the reasonably intelligent attorney to realize that the bottom line will look much better if computerization is built into his substantive and administrative practice.

It is my hope that once you have had the opportunity to skim the next several pages, you will become aware of the possibilities that computers have to offer over the next decade in streamlining your practice and making your hours more productive. I offer no great insights. But I promise that those who have not seriously considered computerization before will realize a new and exciting world presently exists which will entice you to become computer conscious. What we as lawyers can do with computers is limited only by our imaginations. From a business point of view, they are not expensive and may very well pay for themselves immediately by increasing productivity or reducing expenses.

There was a time the question was "Can I afford to have a computer?" Now the question is "Can I afford not to have one?"

THE FISCAL FALLACY

There are many misconceptions that many lawyers have regarding the practice of law. For present purposes, I have narrowed them to five: (1) the practice of law is a profession and not a business; (2) although expenses should be considered, they are not related to net profit; (3) competition is a matter of concern to other law firms; (4) clients are only interested in legal ability and do not think about the techniques of office practice; and (5) computers involve the administration of the firm and do not relate to increased productivity or increased revenues. Let's take a glance at each of these deviations in gray matter.

(1) Profession vs. Business

Many attorneys do not view the practice of law as a business. Undoubtedly, there was a time when one could be a lawyer and not worry about the mundane things, like expenses, marketing and competition. Those were the days when rent was $6.00 a square foot and a secretary was paid $100.00 a week to pound out as many copies of a brief as she could. But like everything else, times have changed all of that.

Now we have to face payroll deductions, cost of living increases, legal holidays and associates who have the nerve to want to earn a living the first year they graduate from law school. Although the old mammoth, who sits in his leather accented office with dusty pictures on the wall, still exists, most of us have to worry about where the next client is coming from.

There is no question that the legal profession is a fine way of earning a living. However, to earn that living, we cannot forget that we are in a business. The terms "business" and "profession" are not mutually inconsistent. That may have been the line of reasoning ten years ago. This approach is no longer tenable because we cannot afford it.

(2) Expenses vs. Net Profit

As in any business, we should all be conscious of the bottom line. How one reaches the bottom line is a matter of some dispute. The seasoned managing partner thinks in terms of productivity and increased revenues. Expenses are those little (and not so little) evils that one has to live with to achieve that end. The law office administrator has a different view. He is cost conscious. His objective is to make sure that the payroll is at its lowest possible level and that the cost of yellow pads does not increase. The managing partner ought to realize that he and the office manager share a purpose to achieve the highest potential net profit for the firm. Expenses have to be considered. After all, net profit is the difference between revenues and expenses. It takes more revenues (more attorney billable hours) to achieve a given net profit in an office that is not cost efficient.

(3) The Other Law Firms

It is probably our egos that prevent us from focusing on the increasing problem of competition. We are all aware that there are other law firms that share the Courts. And we think of them as our rivals from a legal and adversarial point of view. However, it is the rare lawyer who stops and thinks that his client may also be aware that there are alternatives. Although each of us may think that we are head and shoulder above the other in competence, few of us can argue that the work cannot be done elsewhere. We must accept that others may also be able to provide the same quality service at a less expensive price. We are not the only business that has faced increased costs over the years. And the cost of a lawyer is one of the many costs of doing business. Our business clients have probably gone through this mental exercise more than once. Insurance companies had led the business industry in their attempts to control legal expenses. They want quality service at the least possible cost.

The non-insurance commercial industry is not far behind. risk managers and corporate legal departments now set budgets for legal expenses and zealously guard them. We are not all Roscoe Pounds; and unfortunately, others know it. If we are to survive the competition, we must market our product well and at a competitive price. That means that we must produce as many hours as we can as cost efficiently as possible.

(4) Legal Ability vs. Office Practice Techniques

Assuming that a client has searched the market and uncovered two law firms of equal quality, it is obvious that there will be some other factor which the client will consider in deciding which firm to retain. It may be the magnificent view from the conference room window. It may be the fine accouterments of the waiting room. More likely than not, it will be the ability of the firm to meet the client's billing needs or the progressive and cost efficient appearance of the firm that will make the difference.

There was a time when lawyers felt that computer billing was unprofessional and simply unsatisfactory. Even with computer print-outs available, the firm would have the bill retyped. That misconception is a thing of the past. We now realize that clients look at computer billing as not only acceptable, but preferable. There are those who believe that once time is entered into a computer, it cannot be changed and that computer time is less subject to question. In fact, daily time logs can be modified on a computer, for billing purposes, with great ease and do not affect the credibility of the law firm's billing practices. The perception of unquestioned veracity is real and, more often than not, the computer back-up is not even read by the client.

In addition to the law firm's billing practices, clients are becoming more interested and impressed with the attorney's ability to manage his paper flow. This interest varies from the simple ability of the firm to reproduce drafts of agreements or pleadings automatically to the manner in which the lawyer can retrieve documents in his files. A perceptive client realizes that somebody is paying for the time it takes to find a document in an unorganized or mismanaged folder or file cabinet. As we know, that is only a half truth. We all know that it takes more than forty hours of work to produce forty billable hours of time. What are we doing with the time that does not get billed? Obviously, some of that time is spent looking for the missing pleading. The remaining time is spent looking for the file.

(5) Computers and Productivity

When most lawyers think of computers, they think of time and billing or management reports. This is a very important aspect of computers in our practice. If we can manage our billing and keep track of our most important asset (our time), there is no question that the effect will be visible in the bottom line. However, there is more to computers than mere bookkeeping. When we talk about computers, we are talking word processing; that is the ability to draft, edit and reproduce written material with the least amount of people involvement. Word processing has been available in law firms for a number of years. It became popular with the advent of the IBM Mag Card System in the late 1960's and early 1970's. In the middle 1970's, the market took off and a multitude of choices became available. We accepted this revolution because we thought of a word processing unit as a sophisticated typewriter, something we could understand. Many still think of it that way. Surprise, a word processor is a piece of computer equipment.

As computer technology has developed over the past few years, word processing equipment has become even more sophisticated. These wonders can do many things that people think they need separate computers for. One of the functions that certain word processing equipment can perform is document indexing or paper control. Wouldn't it be nice if you could find any letter in your correspondence file within seconds? Heaven is being able to locate all exhibits in a given case without having to read through the depositions. Well, one person's nirvana is another's standard operating procedure. You may already have document control capabilities in your office without even knowing it. There is no question that productivity will be increased if document search in a file is completely avoided.

Computerized research was once a faddish dream of the overly enthusiastic associate or new partner. Relying on a machine for legal research, rather than manual book manipulation was absurd. Just five years ago, computerized research was only considered as a supplemental tool. However, it had an incredible affect on our industry in a very short period of time. The Federal Courts quickly gained access to this form of research and many State Courts added computers to their libraries. Most important is the fact that the law firm across the street from you has this new capability and you don't. Explain that to your client.

COMPUTER PURCHASE

Computers come in all shapes and sizes. They also come in a variety of price ranges. When searching for a system to fit your needs, it may be helpful for you to be aware of certain purchasing concepts. A computer system is composed of hardware and software. Hardware is the equipment. It is the screen (CRT). It is the printer. Similarly, the keyboard and the central processing unit (CPU) are hardware. the information that formats and generates the reports in the equipment is software. Simply stated, software is the instruction which tells the hardware what to do. Software is not a difficult concept to understand, if it is explained. Unfortunately, it is usually assumed that everyone is familiar with this term and it is never discussed. How does this software, the instructions, find its way into the machine? It is not an electronic chip. It is not a piece of circuitry which is wired into the equipment. Software is a typewritten code. A programmer types these instructions into a computer in a language which the computer understands. The instructions are then copied by the computer onto some magnetic media like a diskette. The diskette holds the software. When your computer is installed, the diskette is inserted and read by the machine. Your computer now has the instructions necessary for it to perform the functions which you require.

There are two ways of going about the purchase of a computer and related software: (1) you can acquire the entire system from the same vendor; or (2) you can purchase the hardware from one vendor and the software from a second vendor. In the industry, both approaches are acceptable. However, I prefer to purchase the entire system from the same source for the primary reason that there is only one party responsible for any problems that may occur. In the event that there is a system failure, it is comforting to know that there will not be a proverbial crossing of the fingers by the hardware vendor and the software vendor, each saying, "It's his fault". If our machine is down, I really don't care whose fault it is. I want it fixed quickly and at no cost to the firm. This type of problem may never happen. There are fine systems on the market which are sold by a single rather than multiple

vendors. So why not avoid an unnecessary hassle?

There is another important factor in determining what kind of system to buy. Will it do those things that you purchased it to do? Promises and representations are great. They may help you in Court when you are attempting to rescind the purchase. It makes sense to purchase a system that has been proven and in the legal marketplace for a number of years. Other law firms are the best source of confirmation as to whether the system will perform properly. And those of us who have systems that work well are happy to talk about them.

Finally, consider service and support. A fine system is of little value if it is down or if your staff does not know how to use it. Therefore, the service record of the vendor in your area is of extreme importance. This may also be determined by inquiry with other law firms.

TIME AND BILLING

The key to operating a successful legal practice is the ability to control your time and billing practices. After all, a lawyer's time is his primary asset. We are really no different than any other business. Instead of selling widgets, we sell time. The number of billable hours each attorney intends to work in any given year is the inventory of the firm. Once the time is spent in productive hours and logged, a sale has occurred. It must then be billed and collected.

Time which has been logged is the firm's "work in progress". Logged time which has been billed becomes an "accounts receivable". As long as you understand the concepts of "work in progress" and "accounts receivable", you are well ahead of the rest, for these are the law firm's soft assets. Once you have a control of the firm's soft assets, you have a handle of the true financial picture of your practice. And chances are, if you are not computerized, you have no idea of those soft assets.

There are many benefits of being able to see your work in progress:

(1) Billable time will no longer fall through the cracks. Everyone has encountered the situation of the client that has never been billed. The lawyer forgot that he performed any work for the client. A tape with a bill on it was inadvertently erased. Two lawyers in the same office worked on the matter and each thought the other was billing. A great deal of money can be lost on a yearly basis in this manner. And the truth of the matter is that unless you know the extent of your work in progress, you have no idea of the extent to which dollars and productive hours are being lost.

(2) Work in progress reports provide the firm with a picture of the client and case mix which is in the office. A firm may only think that 10% of its work is committed to personal injury contingency cases. With control of your work in progress, you may find that it is more like 25%.

(3) Associate and paralegal utilization can also be monitored. Most lawyers have come to realize that associates and paralegals have an important function in the difference between breaking even and profit. The type of work they are doing and the number of hours they are working will assist in maximizing that profit.

(4) One of the most frustrating aspects in a lawyer's attempt at financial management is attempting to keep track of client disbursements. If you are on a cash basis, these are not considered expenses but are carried on your books as an asset. Client disbursements have often been called the "missing asset", because manually it is very difficult to know which clients are responsible for these sums on a firm-wide basis. A good work in progress report will remind everyone where this money is going and from

which clients it can be collected. Once a client disbursement reaches a certain level, it really ought to be billed; even if there is a different billing arrangement for fees. Work in progress and accounts receivable will be discussed again. However, at the present time, it is only important that you understand the nature of the firm's "soft assets" and their importance. The benefit of a computerized time and billing system is threefold, it permits control of (1) client management, (2) lawyer management, and (3) law firm management.

(1) Client Management

There are many different approaches which law firms use to manage their financial affairs with their clients. Billing may be based on time, outcome, contingency or on a flat fee basis. Clients are billed at regular intervals, by retainer, at the end of the matter or sporadically. There are generally as many different billing approaches as there are lawyers in the firm. And this is not a reflection of the inability of the firm to develop billing procedures in a uniform manner. Often uniformity is not practical or of any benefit. It is not uncommon for the client to control the nature of the billing practice. Some clients want detailed billing; others need simple monthly statements; and still others require that the time be broken down by the nature of the matter being worked. The form of the lawyer's billing practice is not material. What is important is the ability to conform to the client's needs and produce a bill as quickly and inexpensively as possible. It is equally important that the billing procedure be such that no time is lost in the system. Lost time is money that is literally thrown away.

There are many manual billing systems still in use at the present time. These are generally people-oriented. Reliance is placed on people hours to keep track of and produce client time and billing. Some attorneys handle their own billing. This is probably the least cost effective system of all. The time is not billable and lawyers are not good recordkeepers. Many lawyers have their secretaries take care of the manual billing requirements for their clients. This is certainly better than attorney time. However, it is still not preferable. The secretaries' time is better off spent producing paper which is often the product from which the attorney is entitled to bill. If the firm is large enough, there may be a bookkeeper or bookkeeping department. If your firm is at this stage of its evolution and still on a manual system, you are definitely in need of computerization.

A bookkeeper may be able to adequately handle the billing functions of the firm manually. However, that individual probably has his/her hands full. And after all of that work is done, the bookkeeper still has no control of the "soft assets" previously mentioned. With a computer, the work in progress and accounts receivable data can be an automatic by-product. No extra work is required. With the same amount of effort in producing a bill and logging receipts manually, the firm can produce records of (1) unbilled time [work in progress], (2) unbilled disbursements [work in progress], (3) escrow accounts, (4) accounts receivable, (5) client activity, and (6) history of client receipts. And the billing can be done automatically. Not bad? The most important thing is the ability of the lawyer and the firm to maintain control of the dollars flowing in and out of the office. With this information available, more time can be spent practicing law and directing the financial future of the firm.

(2) Lawyer Management

With the assistance of the computer, the same material that is used in producing the client bill can also provide informa-

tion relating to the practice of the individual lawyers. Most lawyers have an idea of the number of productive hours they need for the year and the amount of income they hope to produce or have credited to their account. However, it usually stops there. Manually, no attempt is made to keep track of the billable hours logged or billed by the attorney. This is most unfortunate. Once the lawyer has the information available about where his time has been spent, he is better able to make the most productive use of his hours. That means greater income. In addition, time that is otherwise forgotten or lost can be followed and billed properly. That also means greater income. Computerized lawyer management reports also permits those responsible for associates and paralegals to fully maximize their time and workload. The result is obvious.

(3) Law Firm Management

By maintaining records of client and lawyer management reports, the law firm, as a whole, can better take care of its own fiscal affairs. Whether the organizational structure is a partnership or a professional corporation, the success of the firm depends on the success of the income producers as a whole. The firm's net profit depends upon the ability of the entire organization to generate more in revenues than expenses incurred. By being able to review the activity of the attorneys as a totality, maximum revenues can be achieved. In addition, the firm's ledgers, balance sheets and income statements can be produced by the same system which has generated so much income in billing.

It is not a question of whether to purchase a computer. Rather, the issue is what kind of computer should you purchase..

WORD PROCESSING

As previously explained, word processing is the ability to draft, edit and reproduce written material with the least amount of people involvement. Word processing equipment has taken on a myriad of forms. There is the memory typewriter which provides the secretary with the ability to store a limited amount of information for later retrieval onto a printed page. Memory typewriters are generally the least expensive form of word processing equipment. There is no screen to work from and changes are made on draft paper. In addition, generally, the amount of information which can be stored at any given time is limited. This limitation may be anywhere from a few words to approximately one hundred pages. There are also units on the market which permit storage onto diskette media known as floppy diskettes. With the use of these diskettes, the amount of storage is virtually unlimited. However, once a diskette unit is added to the memory typewriter, the cost of the equipment is increased. Since there are inherent limitations to the memory typewriter verses equipment with a screen, an expensive memory typewriter with diskette may not be cost efficient. It may be fine for repetitive letter production and occasional long document work. It is certainly better than a typewriter. However, if your purpose is to use the machine for pleadings, briefs, wills and the like, a memory typewriter may not suit your needs.

The most common word processing equipment found in law firms today is the traditional personal computer (PC) which consists of a keyboard, a screen (CRT) and a printer. (Of course, there is the processing unit itself and the disk drive. but that sounds too much like computer talk and I want to keep this simple.) Purchasing a word processing unit is like buying a car. There are more models than you care to look at and each has a particular bell or whistle that the other doesn't. the best approach in searching the market is to determine all of your wants and desires and then to see if there is a product on the market that fits your needs. There probably is. Don't let the price be the determining factor. After all, one of the benefits of a word processing unit is to increase productivity and decrease personnel time in producing your paper. It does not take long for a more expensive piece of equipment to pay for itself.

There are certain basic functions that are a must for any computer hardware and software you buy for purposes of word processing.

(1) Ease of Operation

The equipment must be basically easy to operate. In the computer industry, this is referred to as "user friendly". You do not want the person operating the word processing unit to become the most indispensable person in your office.

(2) Speed of Operation

It should permit editing of documents with a minimum amount of effort or keystrokes. Editing should be an easy task. The idea is to have the machine make changes in less time than it takes to retype the document.

(3) Visual Ease

The type on the screen should be generally the same as the end product which will be printed on paper. In your search, you will find equipment that runs on different kinds of codes. For example, when you want to underline a phrase, what you see on the screen ought to be an underlined phrase, not some cryptic message indicating that the machine knows you want to underline.

(4) Merging

The unit should possess the capability of merging various documents or parts of documents together. One from Column A and two from Column B. This is particularly important if you are interested in utilization of the equipment for wills, interrogatories or agreements comprising standard paragraphs.

(5) Footnoting

If you are a prolific writer and enjoy frustrating the Court with footnotes, consider a machine that has footnoting capabilities. A tremendous amount of time can be spent having to customize a page to allow for proper footnoting space.

(6) Printers

Of course, the word processing unit must be able to print the material that is entered into it. This seems rather basic. However, printers are a breed in and of themselves. There are high speed line printers that are great for draft work, but do not have the appearance of letter quality. There are letter quality printers that print slower than a secretary can type. And now there are the inkjet and laser printers which produce a superior finished product. Many people attempt to save money on the printer which may be the most important part of the equipment.

(7) Independent Printing

The equipment should have the capability of printing and permitting the secretary to type additional pages or another document at the same time. Without this advantage, you are acquiring only half the benefit of the unit. There is nothing more frustrating than seeing a secretary spending half of her day watching the printer print.

(8) Automatic Paper Feeding

In this regard, the printer should have the option of an automatic paper feeder. This option permits the secretary to continue her typing work while the machine is printing several pages. For example, suppose that your office has a sophisticated word processing unit with a fast printer. And let us assume that your

secretary is printing a 30 page brief. Even though the machine may have the capability of permitting her to continue typing while it is printing, without an automatic feeder, she must stop every 30 or 45 seconds to add another piece of paper to the printer. On the other hand, with this option attached to the printer, the same secretary could continue with 20 minutes of additional typing while the brief is printing. These automatic paper feeding options are expensive and may cost as much as the printer itself. However, the cost must be compared with the personnel time saved over the life of the machine. I have estimated that this option can increase the efficiency of the operator by as much as thirty per cent. It doesn't take long for the option to pay for itself.

(9) Spelling Aids

One of the best features that I have found in using word processing equipment is the spelling verification aid or the electronic dictionary. Mistakes are bound to occur occasionally. Any assistance in preventing the embarrassing typographical error is a plus. Word verification aids automatically check the text of the material with an electronic dictionary which is in the word processing unit. This feature is obviously not able to check words that are used out of context. And, if a wrong preposition is typed, the aid will not catch it. However, it will find words that are actually spelled incorrectly and serves the attorney and the secretary as an assistant proof reader.

A COMPUTER AT YOUR DESK?

The new trend is for the lawyer to have a computer at his/her desk. Unfortunately, this is becoming [of all things] a status symbol. I say unfortunately because little thought is given regarding the use which will be made of this machine. There are a number of needs a computer can serve as an integral part of the attorney's practice. To be sure, with some imagination and patience, the computer will become as indispensable as the Dictaphone. Below are a few thoughts which might be considered in determining whether you have such a need.

(1) What Kind to Buy?

By the time that you read this, it may be too late for you to make a choice. You may be tied into a certain kind of computer because of a need for it to be compatible with others in the office. But, please, make sure that compatibility is a true need before you make the decision. As far as I am concerned, the most important feature in deciding what kind of computer should be purchased for the lawyer is its ease of use. If it takes too long to master, it will not be used at all.

To oversimplify matters, I will break the choice into two categories: (1) The IBM type of PC's and (2) The Apple Macintosh. To those who have no choice, I offer my regrets. To those of you who have the insight and forethought to make an independent evaluation and decision, Welcome to Macintosh. The difference between the conventional PC and the Macintosh is like the difference between driving an Oldsmobile station wagon and a Porsche.

There are those rare occasions when it is necessary to select the conventional PC instead of the Macintosh. However, let me emphasize that this is rare.

Whichever kind of computer you select it is important that you have a learning or start up plan. If you attempt to absorb too much, you will lose interest and not learn at all. Make a list of what you would like to accomplish, establish priorities and work on one item at a time.

(2) Computerized Research

Most of us are familiar with Westlaw or Lexis. If you are an active computer research user, you have no doubt been inconvenienced when the terminal in the library is busy. Since you are already familiar with Westlaw or Lexis, this may be a good starting point at your desk. You

will find yourself doing more substantive research and more often [if you have a machine at home, occasional nighttime research is actually fun for the family to watch]. You should also be aware, there are many more databases available than simply those two. By last count, there were actually 3,700 databases from which to choose.

(3) Electronic Mail

Heaven is never seeing a pink telephone slip again. If your secretary and you are connected by computer, your messages can be listed and saved on your screen. This is a much more efficient and productive way of managing phone calls. When you finally learn where the keys are, you can leave instructions for your secretary or paralegal to respond to certain calls. Electronic mail is also a fine means of communicating with other lawyers in your firm. It has the advantage over voice mail of permitting you to keep a computer copy or paper copy of your interoffice memos.

(4) Electronic Rolodex

Have you ever lost a telephone number? Do you find yourself searching through a file to locate a piece of letterhead so that you can call someone? With an electronic address book, you can have all of this information at your fingertips. If you do not intend to type this information into your machine yourself, your secretary or paralegal can keep it up to date for you.

(5) Time Sheets

Can't find a client number? Or when was the last time that you inverted the numbers when you filled out your time sheet? By keeping your time sheets on your computer, you can have a client list maintained so that the name and number will not have to be typed each time. Instead, it can simply be copied from the list.

(6) Calendaring

There are a variety of dates that lawyers need to monitor. There are conferences, due dates for pleadings, hearings, etc. Most attorneys have a manual system which "sort of" works. The more automated the calendar system, the better it will work. And computers are very good at automation.

(7) Drafting

At some point, [particularly if you are exposed to a Macintosh] you will see the wisdom in becoming "keyboard savvy". When this occurs, you will notice a quantum leap into a new style of practice. You will produce more on weekends and evenings than you ever imagined. Everyone has run into the occasion when a note or memo simply does not get sent because it is too inconvenient to wait until it gets typed. No more.

Many do not realize how dependent we really are on our staff until we step back and realize what little can actually be produced on our own. Once you have a command of the keyboard, you have gained true command of your practice.

(8) Litigation Support

The subject of litigation support is so broad that it cannot even summarily be addressed here. Simply keep in mind that, with a machine at your desk, you will have access to the various lists, pleadings and documents that have been created by your staff.

(9) Just for the Fun of It

As a pastime, there are few choices with the variety and flexibility of a computer. It is available in all kinds of weather. If you have an outside interest, there are programs that you will find in that subject category [from Bridge to Brain Surgery].

(10) Keeping up with the Children

Forget about the Jones'. If you wish to avoid a further generation gap, you will have to become computer literate.

Well, there it is - in a nutshell. If you take the plunge, I wish you luck. In the event you have decided to join the Macintosh World, give me a call and join the Group.

Richard K. Herrmann, is a director in the law firm of Bayard, Handelman & Murdoch. He is current "Retired Chair" of the Products Liability Committee of the TIPS Section of the American Bar Association and teaches Products Liability and Advance Trial Techniques at Widener University School of Law. Mr Herrmann served as the 1986-87 Editor of Callaghan's "Products Liability: Commentary & Cases". He is the author of numerous articles dealing with expert witnesses, product liability, risk management and related subjects.

EXPERT SYSTEMS FOR LEGAL ETHICS?

Bruce I. Kogan

Introduction

Futurists have long dreamed of a super-intelligent machine capable of conversing with and enlightening humans. While they may not yet have the linguistic capability to carry on oral conversations, computers are now being configured into systems with some very human-like reasoning powers. These "Expert Systems" are beginning to find applications in the law.[1] This article will consider whether such systems could ever be used to assist lawyers in resolving professional responsibility problems. It is probably beneficial to begin by describing expert systems and explaining how they are developed.

Expert Systems

The term "Expert Systems" refers to a broad range of computer programs that attempt to apply artificial intelligence[2] technology to the resolution of problems that traditionally only human experts could tackle. Human experts frequently engage in formal study of their particular subject area (or domain) over a period of years and then begin to practice their profession or trade. As they gain in experience and working knowledge of their domain, they become more and more competent until they are regarded by others as "experts" in their field. These seasoned practitioners will usually be able to resolve most problems within their area of specialization (even ones involving considerable uncertainty) and will often be able to explain how they did it. Sometimes, however, even the experts themselves may not be able to explain precisely how they intuitively arrived at the solution.[3] It is quite likely that heuristics (informal judgmental rules-of-thumb) play a significant role in the process.

For any computer-based expert system to mimic the way human experts reason about complex problems, it must possess the following attributes:

(a) An expandable knowledge base which explicitly represents the specialized knowledge and expertise of the particular domain in a manner that can be processed by the computer. This knowledge base could contain facts, rules, concepts, relationships, and goals;

(b) A domain independent sub-set of computer programs constructed to apply the knowledge base to specific problems posed by the user. These control programs are usually referred to as the "inference engine" since they provide a structured logic for the reasoning strategies which the system uses to arrive at conclusions;

(c) The ability to reason with uncertain evidence and knowledge through a weighted certainty calculus in order to arrive at conclusions even though the system's level of confidence in those conclusions may not be absolute[4];

(d) A user-friendly environment providing on-line help facilities since most users are likely to possess some level of expertise in their own domain, but not necessarily in computer programming and systems design; and finally;

(e) The ability to generate explanations of how the reasoning process worked through (or perhaps more accurately "about") the knowledge base in order to justify the conclusion reached.

Although artificial intelligence has been recognized as a discrete research discipline within computer science for more than thirty years, it was only in the early 1970's that laboratory attempts were made to construct working expert systems. The best known example of such a specifically designed expert system is MYCIN, a Stanford University developed project which is used to assist physicians diagnose infectious diseases and prescribe appropriate treatment regimens.[5] Other successful expert systems have been custom built for interpretation of mass-spectrogram results (META-DENDRAL), lung function diagnosis (PUFF), geological exploration (PROSPECTOR), and for cost-effective configuration of micro-computer system manufacturing orders (XCON).[6] These systems were made possible in large part by the development in the 1970's of two powerful programming languages, LISP (List Processing Language)[7] and PROLOG (Programming in Logic).[8]

The expandability of the knowledge base and the domain independence of the inference engine led artificial intelligence scientists and programmers in the late 1970's and early 1980's to develop empty expert systems ("shells") which could be applied in a variety of different domains of similar type. These shell systems are generally made up of two separate program "tools". The first is a compiler to encode the expert knowledge of the particular specialized subject area into explicit internal representations which the computer can process. The other component is the run-time system made up of the inference engine, certainty calculus, explanation generating facility, and the on-line help facility. Numerous commercial vendors now market expert system shell packages for use on all types of computer hardware including the now omnipresent personal computer.[9]

Developing An Expert System

Even if an off-the-shelf shell package is to be utilized, the development of a new domain-specific expert system is not an easy undertaking.[10] The task will involve the participation of at least one computer programmer experienced with expert systems (a so-called "knowledge engineer") and at least one domain-specific expert. The project is initiated by a collaborative assessment of feasibility and a careful analysis of system requirements and expectations. The system is not likely to be feasible unless (a) there is a reasonably well-defined area of expert knowledge; (b) there is an expert available who possesses the desired special knowledge, judgment and experience; and (c) the expert is able (with the help of the knowledge engineer) to articulate the knowledge and the methodology used for performing the desired tasks.

As the expert system will eventually be used to solve individual problems, the knowledge elicitation process centers around test cases. The expert is asked for conclusions in each test case and for an explanation of how that result was

reached. From these smaller units of knowledge, the knowledge engineer will begin to formulate rules which can be encoded in a format which relates a set of conditions to a particular conclusion. Frequently in simple expert systems, the format chosen is the of "IF-THEN" propositional logic. The basic rule structure would then appear as: IF (conjunction of condition propositions), THEN (conclusion proposition). Using this format we can represent the legal *respondeat superior* principle by the following rule:

IF (a) a master-servant relationship exists; and
(b) the servant's negligent conduct injures a third party; and
(c) the servant was acting within the scope of his employment;
THEN the master can beheld liable for the damages to the injured third party.

It is worth noting at this point that each of the three conditional propositions stated above is itself a conclusion reached after a lower-level "IF-THEN" syllogism. For example, conditional proposition (a) above can only be reached after applying the following rule:

IF (a) a consensual agreement is entered into by a principal and agent; and
(b) the principal has the right to control the manner in which the agent accomplishes the undertaking,
THEN a master-servant relationship exists between the principal and agent.

After the human expert's input as to the test cases is encoded into rules, a prototype is constructed with a relatively small knowledge base. The test cases are then posed to the expert system to resolve. The system should produce the same conclusions reached by the human expert during the knowledge elicitation phase and should be able to generate an explanation of the logical processes used to reach that conclusion. If the results from the system are at variance from the human expert's at this point, then some modifications will have to be made in the way the knowledge engineer represented the rules deduced from the human expert. As soon as consonant results are reached in the test cases, the expert system can now be applied to new test cases. This process is likely to result in further modification to the existing rules and the addition of new rules to the knowledge base.

Throughout the system development process the human expert continues to serve as a critic of the expert system's performance and as a source of additional detailed rules to be encoded into the knowledge base as more complex problems are put to the system. The process is obviously an evolutionary one. Problems will continue to be presented in getting the computer to understand the meanings of the words which need to be encoded into the knowledge base and in choosing the appropriate degree of generality at which to compare the factual situations which the words describe. These natural language understanding and notational problems are substantial.[11]

Application of Expert Systems to Legal Professional Responsibility

While some scholars have questioned whether law is a suitable domain for the application of an expert system,[12] it does appear that their use by attorneys in regard to specialized legal problems may be useful. The increasing complexity and sheer growth of the content of law means that lawyers will inevitably be presented with problems outside their current realm of expertise. If reliable expert systems in the various specialized areas of legal practice were available to lawyers, then significant cost and time savings could be effected. Such systems would not be expected to supplant the lawyer (direct client use of the expert system is not envisioned), rather they would serve as an additional legal resource for the professional to utilize in identifying issues, narrowing the scope of the inquiry, and ultimately in advising the client.

One legal problem area which confronts all 600,000 plus American attorneys regardless of their recognized specialties is professional responsibility. With that large a potential market for an expert system, the rather substantial development costs of the system could be spread over a larger number of users making the service affordable and readily available to all. It is probable that a sophisticated centralized system could be accessed through an on-line computer network like ABA/net.[13] Centralization of the system would provide the added benefits of easy up-dating as new cases are decided or as the formal standards of professional responsibility are amended.

The fact that there are formal standards of professional responsibility is a strong argument for the feasibility of an expert system in this area. The "IF-THEN" rule format of the expert system knowledge base discussed above lends itself particularly nicely to a domain in which a well developed rule structure already exists.[14] The ABA Model Code of Professional Responsibility and Model Rules of Professional Conduct do constitute a very well developed rule structure complete with numerous examples, explanations, and goal statements interspersed in the official Ethical Considerations or Comments. This expansive commentary will reduce the need for human expert input, but will certainly not eliminate the involvement of legal ethics experts in the project.[15]

One problem that would have to be dealt with is the dichotomous nature of the existing standards of professional responsibility. Two different types of professional conduct standards are articulated by the Model Code or Model Rules. Those of duty and those of discretion. the first type represent rules of duty which either mandate or proscribe particular conduct by lawyers under specific circumstances and for which violation is likely to result in some form of sanction. Examples of these duty-bound rules are Model Rule 1.4(a) requiring a lawyer to "keep a client reasonably informed about the status of a matter" and Model Code DR 4-101(B) prohibiting a lawyer from knowingly revealing "a confidence or secret of his client."

The second types of rules are discretionary in nature describing permissive conduct which lawyers may engage in under specific circumstances. By way of example, Model Rule 1.16(b) provides for a series of situations in which a lawyer *may* withdraw from presenting a client such as when "the client has used the lawyer's services to perpetrate a crime or fraud." Presumably, the logic system of the inference engine and the certainty calculus could enable an expert system to arrive at problem resolutions recognizing the difference between mandatory and discretionary rules.

In the end, however, it should be recognized that professional responsibility decisions of lawyers involve the application of a complex set of internally generated standards of conduct in addition to the externally imposed standards represent by the ABA Model Code or Model Rules. Our conduct is influenced by the values we have absorbed from our parents, teachers, religious beliefs, philosophical precepts, and, perhaps, even from the literature we have read and the movies we have seen.

It is not likely that an expert system for legal professional responsibility would be able to build into its knowledge base rules reflecting the internally generated standards of conduct of the particular user. In fact, great care might have to be taken in the construction of the knowledge base to avoid unduly biasing the system with the personal moral values of the individual human expert who participates in the system design project.

That is not to say that an expert system would be valueless in this area. Rather, it is to recognize that such a system, if ever developed, would only assist the lawyer in arriving at a personal resolution to a professional responsibility quandary. That assistance would likely take the form of identifying issues, narrowing the scope of inquiry, assuring that no applicable rules are overlooked, and the offering of tentative alternative courses of action to be followed. The ultimate decision on a proper response to the problem will remain the lawyer's.

Bruce I. Kogan is an Associate Professor of Law and Director of Graduate Legal Studies at the Delaware campus of Widener University School of Law. He holds degrees from Syracuse University (A.B.), Dickinson School of Law (J.D.), and Georgetown University Law Center (LL.M. in Taxation). Before entering fulltime law teaching, Professor Kogan had practiced with the Tax Division of the U.S. Department of Justice and a private firm in Harrisburg, Pennsylvania. His current teaching areas include federal taxation and estate planning.

(footnotes)

[1]*See, e.g.*, Gruner, "Thinking Like a Lawyer," 1 *High Technology Law Journal* 259-328 (1986); Bing, "Developing Knowledge Based Legal Systems for the Public Administration," 20 *Law Technology* 58 (1987)

[2]Artificial intelligence is "that part of computer science concerned with designing intelligent computer systems, i.e. systems that exhibit the characteristics which *we* associate with *intelligence* in human behavior - e.g. understanding language, reasoning, solving problems etc." R. Born, *Artificial Intelligence; The Case Against* at viii (1987). *See also*, R. Forsyth & C. Naylor, *The Hitch-Hiker's Guide To Artificial Intelligence* (1986); E.Charniak & D. McDermott, *Introduction To Artificial Intelligence* (1985); and Sheil, "Thinking About Artificial Intelligence," 65 *Harvard Business Review 91* (1987); and Rasmus, "Artificial Intelligence From A to I," 4 *Mac-User* 118-130 (1988).

[3]A particularly well-drawn comparison between computers and the brain can be found in A. M. de Callatay, *Natural and Artificial Intelligence* (1986).

[4]"Artificial intelligence development systems are ideally suited to the coding of complex programs because they can cope with the uncertainty that is often present." Sheil, "Programming The Uncertain With Exploratory Systems," 24 *Computer Design* 133 (1985).

[5]*See, generally*, W. J. Black, *Intelligent Knowledge Based Systems — An Introduction* at 2-20 (1986); and Gill, "Medical Expert Systems; Grappling With Issues of Liability," 1 *High Technology Law Journal* 483-520 (1986).

[6]*See*, Webster and Miner, "Expert Systems - Programming Problem Solving," *Technology/2* 62-73 (Jan. 1982) and Gevarter, "Expert Systems: Limited But Powerful," 20 *IEEE Spectrum* 39-45 (1983) for a review of existing custom built expert systems.

[7]LISP was developed to make it easier to program problems in which the knowledge is best represented using lists. *See* S. Tanimoto, *The Elements of Artificial Intelligence — An Introduction Using LISP* (1987).

[8]PROLOG, on the other hand, was designed to program problems in which the knowledge is best represented using statements in formal logic. *See*, W. J. Black, *supra* note 5, at 22-47.

[9]A variety of expert system shell packages are described in recent articles. *See* Moskatel, "Computerized Expert systems In The Law office,"12 *Legal Economics* 59-68 (1986); Martorelli, "PC-Based Expert Systems Arrive," 34 *Datamation* 56-66 (1988); Kinnucan, "Software Tools Speed Expert System Development," 5 *High Technology* 16-20 (1985); Freedman and Davis, "Artificial Intelligence Goes to Work," 7 *High Technology* 16-27 (1987).

[10]For an understandable and concise description of the expert system development process, *see* Haley and Williams, "Expert System Development Requires Knowledge Engineering,"25 *Computer Design* 83-88 (1986).

[11]*See, generally*, M. A. Boden, *Artificial Intelligence and Natural Man*, at 95-175 (1977); and M. Arbib, *Brains, Machines, and Mathematics* (2nd ed., 1988).

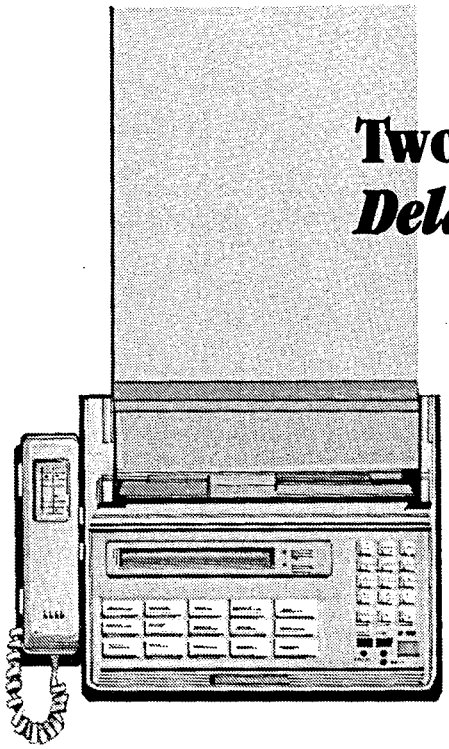
[12]*See, e.g.*, Susskind, "Some Preliminary Considerations Concerning Expert Systems In Law," 14 *Northern Kentucky Law Review* 211-235 (1987); Tito, "Artificial Intelligence: Can Computers Understand Why Two Legal Cases Are Similar?" VII *Computer Law Journal* 409-437 (1987); and Susskind, "Expert Systems In Law; A Jurisprudential Approach to Artificial Intelligence and Legal Reasoning," 49 *The Modern Law Review* 168-194 (1986).

[13]The American Bar Association supports an online computer network known as ABA/net. The system provides subscribing lawyers with a convenient gateway to more than 1,000 public and private databases on diverse topics. Additional information regarding ABA-NET may be obtained from the American Bar Association at (800)336-INET.

[14]Federal income tax law is an area where a well developed rule structure of Code, Regulations, rulings, etc. already exists. One accounting form has implemented an expert system called "ExperTAX" that helps accountants in reviewing the way their clients accrue taxes and in offering planning advice. *See*, Leonard-Barton and Sviolka, "Putting Expert Systems to Work," 66 *Harvard Business Review* 91-98 (1988).

[15]The author is currently aware of a research project examining the feasibility of constructing a legal professional responsibility expert system. Involved in that project are Associate professor of Mathematics E. Dennis Huthnance of Bloomsburg University, Bloomsburg, Pennsylvania, and Christopher Girton, Esquire, who is currently an LL.M. candidate at Widener University School of Law, Wilmington, Delaware.

Two More Reasons To Use C T's *Delaware Express*™ Service!



New Extended Hours!

We know there are times when you need a critical filing date late in the day. And we want to help. Our two Delaware offices will remain open longer in order to serve you better. Their new hours are:

8:30 a.m. to 7:30 p.m. (E.S.T.)

Facsimile Documents!

Now that facsimile copies of Certificates of Incorporation and other documents are being accepted by the Secretary of State of Delaware, same day service from C T is easier than ever.

Rush incorporation? Simply fax a *legible* copy of your Delaware Certificate of Incorporation to either our Wilmington or Dover office. We'll arrange for the filing as soon as it is received. Want to save the extra handling fee imposed by the state for rush filings? Just make sure C T reserves the name and we're designated registered agent. County recording? Don't worry. Our experienced Delaware staff will take care of it, automatically.

So for fast turnaround on your next Delaware incorporation, use C T's *Delaware Express* filing service. For more information on how we can expedite all of your Delaware corporate and limited partnership filings through our new Delaware fax service, just contact your local C T branch office at: 1209 Orange Street, Wilmington, DE 19801, Tel: (302) 658-7581.

Please keep your local C T Account Representative informed of your facsimile transmissions, so our records can be properly noted.

THE CORPORATION TRUST COMPANY

Serving the legal profession since 1892

In Wilmington
■ Fax: (302) 655-5049 ■ Fax: (302) 655-1476

In Dover
■ Fax: (302) 674-8340

AUTOMATION IN THE COURTS

Thomas J. Ralston

On December 21, 1988, Judge Richard S. Gebelein was conducting the usual Wednesday morning arraignments in the Public Building's Courtroom No. 301. Although the judge was in his usual position on the bench, the defendant and the Public Defender entered their appearance in the form of a video image on a monitor. They stood before a camera three miles away at Gander Hill and addressed a monitor displaying Judge Gebelein's image. Video arraignments had come to Delaware.

More recently, the same Public Building - Gander Hill linkup has been used for other purposes as well. The details are discussed later.

Delaware courts are going Hi Tech.

• • •

Courts have always been highly traditional institutions and have lagged behind other governmental agencies and the private sector when it comes to the application of developing technologies. Nevertheless, while not on the cutting edge of high tech, Delaware's courts are quietly adapting many technologies to get the work done. These applications include computerized calendaring, notification and dockets; computer-assisted transcription (CAT); word processing; microfilmed records; faxing of court documents; telephone message lines and microwave video transmission. Since some of these applications are not widely known within Delaware's legal community, it is timely to review the uses of high-tech in the Delaware courts, and provide some news about court operations.

• • •

Video. In New Castle County, all incarcerated defendants are arraigned by video in Superior Court. Signals are relayed between the Public Building and Gander Hill by microwave transmitters and receivers which are mounted atop each building.

Video arraignments are conducted each Wednesday morning at 9:30 a.m. Defendants are escorted one-at-a-time into Court 18 at Gander Hill which, for a short while, becomes a studio. A Public Defender is on hand to enter a plea of not guilty and to indicate which attorney will be providing legal representation. The presiding judge will accept the plea and tell the defendant when he or she (incarcerated female defendants are transported to Gander Hill from the women's prison for arraignment) is scheduled for trial.

A more recent use of the microwave hookup to Gander Hill is for bail motion hearings. For incarcerated defendants seeking a reduction in bail, Superior Court in New Castle County uses the same format as for arraignments. If the court reduces bail to unsecured, own recognizance, or to a level the defendant can make, a bail bond form is prepared in the Prothonotary's Office and faxed to the Booking and Receiving section at Gander Hill. After the form is signed by the defendant, it is faxed back to the prothonotary. The release papers are then faxed to Gander Hill where the defendant is released. This new procedure obviates the need for the Department of corrections to transport the defendant to the Public Building to sign the bail bond forms.

There is some irony in the proceedings conducted by video. Although the judge and defendant are separated by a distance of about 3 miles, we find that the communications by video bring a certain intimacy not found in live courtroom proceedings. Some of the judges have commented that there is more eye contact with the defendants when viewed on the monitor than is to be found when the defendant stands before the judge in the sometimes chaotic environment of Courtroom No. 301. With fewer distractions at Gander Hill, the defendants appear to be more attentive to the business at hand.

Video proceedings provide important benefits. Foremost is the added security which results from not having to transport prisoners from the prison to the Public Building and back. As many as 35-40 defendants are arraigned by video each week. And there are substantial savings in personnel and vehicle costs for the Department of Corrections.

Also, since the video signals can be recorded on a VCR, a videotape record is kept of the proceedings. This provides some relief to our court reporters, who can be assigned to more difficult matters where a request for transcript is more likely.

In the long term, video communications will provide increased scheduling flexibility to the courts. If we are eventually able to conduct arraignments, bail hearings and other matters with the flick of a switch, we will be able to reduce the time between motion and hearing and accelerate the movement of cases to disposition. We will respond to bail motions as they are filed rather than holding them until the following Tuesday.

There are two channels on the Public Building - Gander Hill hookup. One is used for arraignments and bail hearings. The other will provide audio/video communications between the Public Defenders Office and Gander Hill. This will mean increased opportunities for contact between Public Defenders who must be available for trial almost every day and their clients at Gander Hill. It will also be used by Presentence Officers to interview offenders held at Gander Hill.

Video will be used to educate Delawareans about the courts. The Delaware Bar Foundation has awarded a grant to Superior Court for the production of two videotapes. One will be used to orient citizens as they report for jury duty. It will include information about how they were chosen to serve, how jurors are selected for trials and what their duties are, how a trial is conducted, and some history of the jury process. The other video will be broader in scope, providing a description of the court structure in Delaware, the jurisdictions of the various courts, and the paths civil and criminal cases take from complaint or arrest to trial. It will be shown to student and civic groups visiting our courthouses. It will also be used as an instructional aid for judges and other court personnel who take on speaking engagements to promote public awareness of the courts. These videos will be available to members of the Bar.

The use of videotaped depositions and testimony is increasing in Delaware. It is particularly useful for recording the testimony of doctors and other expert

witnesses whose schedules are difficult to coordinate with trial dates.

Police and prosecutors are also using videos. The recent trial of a garbage company owner and landfill weighmasters included videotapes of garbage trucks arriving at and departing the county landfill. Other testimony showed that the logs maintained by the weighmasters did not record the arrival of many of the trucks shown on the videotape.

Computer Assisted Transcription. To the untrained eye, it appears that little has changed in the court reporting business over the past thirty years. In the courtroom, court reporters still must maintain that rapt level of concentration while the fingers dance and the paper notes spew forth from the stenograph machine. Actually, the process has changed significantly in recent years. Almost all the court reporters in the Court of Chancery, Superior Court and the Court of Common Pleas use computer assisted transcription, otherwise known as CAT.

Inside the stenograph machine is a magnetic disk which records each keystroke electronically. Later, the data captured on the magnetic disk are uploaded to a microcomputer for processing through the reporter's dictionary and translated into text. The reporter reviews the text on a monitor, makes editing changes where necessary and prints out the transcript. Gone is the cumbersome process of reading the notes, dictating their contents onto tape, transcribing the tape by a typist, proofreading the draft, and correcting typos. CAT has reduced significantly the time it takes to produce a transcript.

For production of daily copy (same-day) transcript, the reporter's stenograph machine can be connected to a computer in an adjacent courtroom where a "scoper" can edit the output as it is generated. This simultaneous transcription has also been used in trials (not in Delaware) where a deaf participant can read testimony on a monitor which is connected to the stenograph machine.

Automated Legal Research. The courts are regular users of Lexis, Westlaw and Digilaw. There is a terminal in each county for the use of the judges and their law clerks. All law clerks and those judges who use this resource receive training. Usage of these systems is closely monitored to control costs.

Message Machines. Telephone answering machines have become household necessities like microwave ovens and VCR's in recent years. In Superior Court, they are an integral part of the juror notification and reporting system.

In New Castle County, members of the regular jury panel call the jury information line each day after 5:00 p.m. to receive their reporting instructions for the following day. This arrangement, which was implemented several years ago, provides the capability to regulate the number of jurors reporting each day, depending upon such factors as number of cases scheduled for trial and judge availability. A juror message line is also in use in Kent and Sussex Counties.

A call to the new Family Court building in Georgetown, will be answered by, "Hello. You have reached the Sussex County Family Court. Rather than keep you waiting, your automated operator will attempt to help you." This technology is called voice messaging. The automated operator proceeds with instructions to press certain numbers on your phone for general information, administrative offices, judges or masters, case information or the court operator.

This new system, also called voice mail, reduces the amount of time callers must wait for the receptionist to answer since it can respond to many calls simultaneously. It provides a consistent response to callers and reduces the

amount of personnel time it normally takes to refer uninformed callers to the correct location.

Word Processing. Word processing is commonplace in most court offices today. The standard installation is an IBM PC using Displaywrite IV software with a Hewlett-Packard laser printer. Almost all judges' secretaries are equipped with a word processor. Personnel in the Presentence, Prothonotary and Arbitration Offices are regular users too.

Although most word processing is done by secretarial staff, Superior Court judges and law clerks are producing drafts on PC's and turning over their work to secretaries for polishing. Almost half of Superior Court's judges are now PC users.

Mainframe Computers. Deep in the bowels of the Public Building is the Judicial Information Center. The JIC is home to the courts' mainframe, a model 4361 IBM which processes caseload information for many operations of the state courts in each county. These services include calendaring and notification, docketing, jury management, accounting and indexing of archived records. The primary clients of the JIC are Superior Court (SC), Family Court (FC) and the Court of Common Pleas (CCP).

The Courts' caseload database is built with data entered by a variety of users. Initial information such as the defendant's name, address, date of birth, charges, arresting agency, etc., are entered by CCP personnel. Arraignment, case review and trial dates and the AG assigned to the case are entered by SC's Case Scheduling Office after indictment. The Public Defender's Office enters the PD assigned to represent the defendant, and the Department of Justice enters data about victims and witnesses. The Presentence Office enters sentencing dates and the name of the sentencing judge. The Prothonotary's Office is responsible for entering all other data, including all docket entries, disposition, sentence and post-conviction information. The operation of this system depends upon a high level of cooperation among all courts and departments.

The JIC operates Superior Court's jury management system. But the first phase begins at the State of Delaware's computer in Dover where the names of potential jurors are drawn from the Department of Elections file of registered voters and from the Division of Motor Vehicle's file of licensed drivers. These records are combined into a master file. A prescribed number of names is randomly copied to a tape file. The tape is transferred to the JIC where labels are generated for mailing questionnaires to citizens on the tape. Those who are found to be qualified for jury duty, based on the information returned on the questionnaire, are separated into a qualified pool. Names are again drawn randomly from this pool and sent summonses to appear for jury duty.

The JIC was first established in 1979 with a Law Enforcement Assistance Administration grant. The entire operation is devoted to criminal cases. There is no mainframe processing of civil case information, although some funding has been provided to design and build a civil database next year.

The State Police was the first criminal justice agency in Delaware to establish a computerized database, capturing arrest, warrant and criminal history information. The courts were next, followed by the acquisition of a mainframe by the Department of Corrections in 1983. In the mid-1980's it became apparent to all criminal justice agencies that maintaining redundant information on three separate computers was cumbersome and inefficient. Data regarding arrests, defendants, and dispositions were maintained on each of these systems. This meant that state employees were entering the same data into three systems. To make matters worse, the courts were expected to enter dispositional information (detailing whether a case was resolved by verdict, plea, dismissal or nolle prosequi) into the police system as well as entering the same data into their own computer. The result was that many arrest records maintained by the police lacked a final disposition. Something had to give.

In 1984 the Roundtable, an informal organization of the heads of all criminal justice agencies commissioned a Business Systems Planning (BSP) analysis of the data needs of all agencies. The ultimate result of the BSP is that in the near future all criminal justice agencies will be building and sharing the information in one common database. This development has great technological significance because, although there will be one common database, each record will be composed of data housed on the three (police, courts and corrections) mainframes. This arrangement is known as a distributed database.

The software which will connect these mainframes is in the final stages of development. When it becomes operational, the criminal justice agencies of Delaware will be the first in the nation to share in a single integrated system. This will put us light years ahead of most states where each county court system has its own computer, which is separate from the local police, jails, probation, sheriffs, state police and state courts. The problems experienced in Delaware are magnified many times over in states such as New York, Pennsylvania, and Texas which has more than one hundred counties.

Microcomputers. The PC has overtaken the typewriter in the courts. In various court offices you will find many software packages in use including Lotus 123, dBase III and IV, Ventura Desktop Publishing, Borland's Sidekick, Microsoft Windows, Printing Press, Word Star and DisplayWrite 4. Thanks to the classes available to state employees, particularly in the use of Lotus and dBase, many talented and innovative employees are developing their own applications to supplement those available on the mainframe.

Lotus is used by Case Scheduling, Prothonotary, the Jury Manager and Court Administrator to chart caseload statistics, juror demographics and reporting rates and to keep track of expenditures.

All Arbitration cases are captured on dBase, which is used to track the progress of each case, provide information on new and pending cases, monitor elapsed times, and generate monthly caseload statistics. It also features a tickling system which alerts office personnel to follow up when prescribed deadlines have not been met.

The Supreme Court recently began a project to keep track of all attorneys registered in Delaware. This information will in turn be used to update the mainframe's file of attorneys and addresses. All court communications to attorneys will soon use the information on file in the Supreme Court. All changes of name, firm or address should be reported to the Supreme Court immediately.

Computers are now used to maintain personnel files, monitor and report employe use of sick leave and vacation, keep inventory of capital equipment, locate inactive case files on microfilm and keep track of gun permits.

Similarly, judges have automated their individual calendars and Ventura Desktop Publishing is used to design new forms and produce *Hearsay*, Superior Court's employee newsletter.

The Court of Common Pleas uses a PC to keep track of monies owed by defendants for fines, court costs and restitution. It monitors payment schedules and produces past-due warnings and notices for contempt hearings. CCP also uses PC's to capture capias information and report it to local police agencies.

The Family Court is using an IBM in Sussex County to track and maintain control of all case files. Info Trax is the software product which uses bar codes, the same technology used at the supermarket to ring up the cost of groceries. Preprinted bar code labels are affixed to each case file. A light pen, connected to the PC is used to scan the label on a new file. A blank record appears on the monitor. Case information such as caption and file number is input by keyboard.

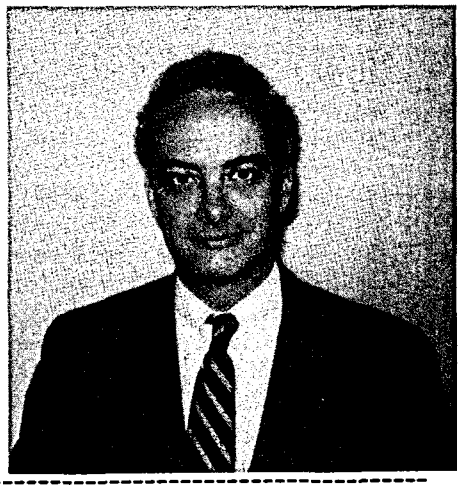
Thereafter, when someone calls for a file, a scan of the label brings the record up, so it can be updated as to location and employee user number by the file clerk. The system can provide a file inventory, a report of files located in each court office and an audit trail of all previous locations of the file. the system also has the capability to send out overdue notices to those holding files beyond pre-established guidelines.

The Department of Justice operates a system which utilizes a mainframe-microcomputer linkup. After each meeting of the Grand Jury, mainframe data related to newly indicted cases is downloaded to a diskette which is used to operate a victim/witness notification system. As cases progress to arraignment, case review, trial or plea, and sentencing, victims and witnesses receive written updates on when proceedings are schedules, and later, what took place at each proceeding.

• • •

Delaware's court system is applying many of today's technologies to daily operations. Many others such as storage of documents on laser-optic disks, bar coded juror ID cards, remote electronic access to court schedules, remote filing of court documents, and computer-output microfilm will no doubt be part of our future.

Thomas J. Ralston, Court Administrator for the Superior Court of Delaware since 1982, has been involved in the introduction of many of the new technologies described in this article to court operations.



THE CRIMINAL LAW ASPECTS OF UNAUTHORIZED ACCESS, INFORMATION THEFT AND OTHER PESTS ASSOCIATED WITH COMPUTER USE

Patricia Mell

"Technology burgeons ahead, keeping people honest lags behind."
Jay BloomBecker, Editor, Books in Print[1]

Since its invention in the 1940's[2], the computer has become a fundamental tool in the operation of governmental, commercial, and academic industries. Institutions as varied as The Federal Reserve Bank, The Department of Defense, the local community college, and department store all base their information management upon a computer or a system of computers. The growth of the technology in this field has made it possible for the office or home computer to communicate with computer network systems around the world with relative ease.

As computers became a more familiar tool, new and innovative uses for it were discovered by all segments of society. The criminal element was particularly quick to learn how to use the computer to advantage. The computer's vast information resources and easy accessibility made it both an attractive target and exceedingly vulnerable to abuse.[3] The potential rewards of the crime far outweighed using more conventional means.[4] The fact that the criminal could easily destroy the evidence of the crime raised the incentives to become familiar with the weaknesses of any computer system. From the computer owner's perspective, the situation was worsened by the fact that the computer's data could be abused by either a creative outsider or a disgruntled or mischievous insider.[5]

Computer crime includes a variety of proscribed activities. There are some instances in which the physical components of the computer, the hardware, are themselves the "victims" of crime.[6] These crimes can easily be dealt with by the traditional criminal law. The more intriguing questions deal with the computer's intangible aspects, its software and the data it contains. Primarily, these activities fall into four categories: theft of property through use of a computer; theft of services; theft of information; and computer sabotage. The most common element of these crimes is the unauthorized access of the computer. Theft of services, or information, and computer sabotage, have the appropriation, manipulation or destruction of intangible property as the object of the crime.

Although unauthorized access and manipulation of data invoke the imposition of the criminal sanction, the traditional criminal law did not recognize either the method of execution, non physical entry into an intangible or the object of the criminal activity, data, as being protected property rights. The protection of these intangible aspects of computer property raised several analytical problems for the traditional common law.

A familiarity with the computer's basic operating procedures is necessary to an understanding of the difficulty of maintaining the security of any computer. There are five primary aspects of a computer's operation. The computer is vulnerable to unauthorized access at each one of them. They are: (1) input; (2) programming; (3) processing in the central processing unit; (4) output; and (5) communication of the data. During the input phase, the criminal might place false data into the computer. In one instance, a computer programmer altered payroll input data to give certain employees unauthorized pay raises.[7] At the programming stage, the computer can be told to institute any number of instructions consistent with the programmer's objectives. Viruses are usually programs which instruct the computer to destroy data or occupy memory. The central processing unit (CPU), as the computer's central memory, is vulnerable to attack from outside access by competitors.[8] At the output stage, data could be transmitted to the user at any terminal and later provided to unauthorized sources.[9]

As late as 1970, most state theft statutes relied on the common law notions of property, value, owner deprivation, and asportation to define a theft offense. This made the existing criminal law largely inapplicable to the theft of computer services and access offenses.

Larceny is defined as the taking and carrying away of the personal property of another with the intent to permanently deprive the owner thereof.[10] At a fundamental level, theft of computer services, theft of information and computer sabotage (where data or software is destroyed) are all theft offenses. In each the owner of the computer is being involuntarily deprived of valuable property - information reduced to electronic impulses. The problem in prosecuting someone under a common law theft statute was that electronic impulses were not recognized as the type of property protected by the law. To include information within the purview of "protected" property, would necessarily create a new crime. Courts were not anxious to usurp that legislative function. Two early cases dealing with theft of computer services and information are indicative of the problem of definition, Lund v. Commonwealth of Virginia[11] and Ward v. Sup. Ct.[12]

Charles Lund was a doctoral student at Virginia Polytechnic Institute and State University (VI). Through an oversight, Lund's thesis supervisor failed to request a computer access code for Lund. To access the computer, Lund simply "borrowed" the codes of other students. The other students were usually unaware that their access codes were being used. There was ample evidence produced at trial that all of the services appropriated were used for the completion of Lund's thesis and that he would have been given an access code had he requested one. He was convicted of grand larceny for having used $26,384.16 worth of computer time without proper authorization.

Lund challenged his conviction on two grounds. First he asserted that there was no evidence that the articles in ques-

tion (computer printouts of his research) were of a value in excess of $100.00. Secondly, he argued that computer time and services could not be the subject of larceny. In reversing the conviction and quashing the indictment, the appellate court agreed that at common law, labor and services could not be the subject of larceny or false pretenses. At that time, Virginia had not amended its statute to include services. Since the printouts had no value to the computer center and no market value, there could be no larceny.

In Ward,[13] the court upheld a conviction for grand larceny simply by virtue of a happenstance of the facts. Ward was an employee of a computer services company. He used a telephone to transfer a secret program from a competitor's computer to that of his employer. At his employer's computer, he printed a copy of the "stolen" program and took the now printed program to his home office. Ward was charged under both California's trade secret and grand theft statutes.[14] Ward's conviction was upheld because he had both reduced the program to tangible property by causing the computer to print a copy of it and carried the copy a short distance. Thus, two of the elements necessary for conviction of common law larceny, "property," and "asportation" had been established. The other elements of the offense were not raised as issues.

Both Ward and Lund posed questions concerning the definitions of value and of property as they relate to computer assets. Of central concern was the question of whether the appropriation of a computer's intangible assets was properly recognized as a criminal offense. If the prosecutor in Lund had established a value for the printouts, Lund would have been found guilty of larceny. If the program Ward appropriated had no market value, or if Ward had failed either to reduce the program to hard copy or to carry the copy to his home, he would have been acquitted of the larceny charge. A wrong was committed by both parties. The law could only address them however, if the offense fit the narrow confines of the existing laws. This was a problem the legislatures would attempt to address.

In both cases, it was established that neither defendant was authorized to access the particular computer under the circumstances of his case. In Lund, the defendant failed to follow proper procedures for gaining access to VPI's computer system. In Ward, that case was more clear. He had no right to appropriate the secret program from his employer's competitor. As such, the question of the lawfulness of their respective possession of the date or use of computer services was easily resolved. This is not the situation in most computer access/theft of information/services cases. By virtue of the nature of computers, the notion of lawful possession translates into an issue of authorized access. The term "authorized access" is the source of many definitional issues computer crimes pose for the common law.

At common law the distinction between larceny, embezzlement and false pretenses turned on the issue of whether the actor was in lawful possession of the property at the time of its appropriation. In the computer environment, the usual parameters of lawful possession are considerably blurred. An individual could be in lawful possession of the physical components of the computer, but have no authorization to use the data or the system contained within it. In addition, an actor could be authorized to access the data in one system, but have no specific authority to access the data in other computers on the network. Even in those jurisdictions which abolished the distinction between these offenses, the notion of lawful possession is a difficult one when dealing with computer services and data. The key consideration becomes the method of determining and controlling lawful possession when the information is in a computer system or network of systems.

The traditional elements of owner deprivation and asportation do not fit these kinds of thefts easily. In a computer the asset of data is a collection of electronic impulses. These impulses can be appropriated by an unauthorized user but need not be removed from the owner's computer. The owner is never deprived of his property. Interestingly, the court in Ward seems not to have considered that the owner of the appropriated data was still in possession of it. Ward did not destroy the data in the owner's files. As such, it would seem that Ward's carrying away a copy of the data did not deprive the owner of its possession even temporarily.[15]

This last characteristic of the theft of computer data and services underscores the difficulty of detecting these crimes. Since the data are never missing, the owner may have no notice of the appropriation of his information. Unless

the data are destroyed in the owner's computer, there is no tangible evidence that a crime has been committed. This would make it necessary for the prosecutor to consider carefully which factors combine to establish that crime has occurred. So a central element of computer crime case would necessarily be proof of the actor's unauthorized access to the computer.

State legislatures responded by enacting various types of computer abuse statutes.[16] Their problem in drafting was determining the proper focus of the protection of the criminal law. There were three possible focal points under consideration. These were the nature of the information itself, the manner in which the information was appropriated, or the intent with which the system was accessed. Analytically, the three were closely intertwined. The nature of the information, or the intent with which it was accessed could either mitigate or aggravate the gravity of the offense. Accessing entirely public information from a terminal for which the actor has no authority could be punished. That offense would appear to be less severe however than the appropriation of secret information from a data base for which the actor had authorization. The result of the legislative endeavors was a myriad of statutes many of which based their penalties on the act of unauthorized access.

These statutes have one of two views on the nature of access.[17] In one, unauthorized access should be a lesser included offense of the crime of computer fraud or information theft. In these statutes, the access must be accompanied with a particular state of mind to be a punishable offense. This means that bona fide error in accessing a computer would not be subject to punishment. The Delaware statute is an example of these. It defines access in the following manner, "...to instruct, communicate with, store data in, retrieve data from, a computer or computer system."[18] Penalties for unauthorized access do not occur unless the actor "knowing that he was not authorized to do so, accessed...any computer system..."[19] The disloyal insider who would have proper authorization to access the system could not be charged under this provision.

The second view holds that unauthorized access by itself is a serious socially disruptive act which should be punished. The focus of this type of statute is one protecting a form of a privacy interest. Maintaining the integrity of the computer system is an interest to be protected even against a person who inadvertently disrupts it.[20] Under statutes of this type, criminal penalties attach regardless of the intention of the unauthorized user and regardless of whether the computer has suffered any damage.[21]

Even with such provisions, proof problems exist. The owner would still have to distinguish between intentional efforts to commit fraud and employee error. Perhaps broadening the definition of unauthorized access to include the use of the computer for purposes adverse to the owner, might alleviate the problem. This would mirror the development of the traditional law of larceny to include embezzlement.

An additional problem with most unauthorized access statutes is that they provide for the punishment of unauthorized access to publicly available information. This notion raises three more questions. First, whether all information should merit the protection of the criminal law. Second, what criteria should be used to distinguish between protected and non-protected information? Finally, should distinctions in punishment be based solely upon intent?

There are various federal statutes which could be used to combat computer abuse. Some, such as the wire interception statute,[22] the Computer Security Act of 1987,[23] and malicious mischief statutes[24] are very specialized. The Mail and Wire Fraud Statutes have also been used.[25] In U.S. v. Seidlitz[26], the defendant misappropriated a computer program through the use of the telephone from a Maryland office to his office in neighboring Virginia. He challenged his conviction charging that the program had not been "carried away" since it was appropriated by electronic signal. His conviction was upheld by the court since he perpetrated his activities through use of a moyen of interstate commerce.

The one federal statute dealing specifically with computer abuse is the 1986 Computer Fraud and Abuse Act.[27] This statute makes it illegal for anyone intentionally to access a U.S. government computer without authorization and in doing so, altering, damaging, or destroying information in the system. While the statute covers many types of computer abuse, it falls short of covering the type of malicious information manipulation and destruction caused by most computer viruses. This is a failing shared by most state statutes.[28]

While viruses have been a security problem for more than a quarter of a century,, they were not widely known until the seventies and only began spreading in 1986.[29] The term virus is used generically to describe a variety of computer "illnesses". They start as a superfluous set of machine language instructions which are attached to a program or operating system.[30] Dangerous viruses have two goals. Their first purpose is to duplicate so that they will thoroughly infiltrate the disk. Second, they destroy the targeted files. While viruses usually destroy the intangible data, in one instance, a virus was used to cause a video monitor to burst into flames.[31] Since the duplication process is subtle, it may take months before the damage done can be detected.[32]

Since a virus is a series of machine language instructions, the computer's central processor[33] will execute them directly. For the computer to follow these instructions, however, the virus must first become part of an application program.[34]

There are four types of malicious software. Trapdoors, time or logic bombs, trojan horses and worms.[35]

A trapdoor is an operating system and application safeguard designed to prevent unauthorized personnel from accessing or modifying a program. Programmers create these entry points into a program for debugging and insertion of new codes at a later date. These entry points (trapdoors) are usually eliminated in the final stages of programming but are sometimes overlooked either intentionally or accidentally. Trapdoors can grant unlimited and virtually undetectable access to any system resource after the presentation of a trivial control sequence or password.[36]

The second type is called a logic bomb. This is a program which triggers an unauthorized, malicious act when some predefined condition occurs. The most common type of time bomb is programmed to trigger an unauthorized damaging act long after the bomb is set. It is this delay feature, which makes a logic bomb virus dangerous. It can infect numerous generations of both original and backup copies of data and software before its existence is discovered.[37] This is the type of device used to down the USPA & IRA system in the Texas Virus case.

A worm is developed by programmers to tap the unused network resources which run large computer programs. The worm works in the following

manner. First, it searches the network for idle computing resources. Once found, the worm uses them to execute a program in small segments. Built in mechanisms would be responsible for maintaining the worm, finding free machines, and replicating the program. Worms can tie up all the computing resources on a network and essentially shut down the system.[38] This is the type of virus used against the Internet system in November, 1988.

The final type of virus is the trojan horse, a program that looks normal but contains a harmful code within it. Usually it is a production program which is changed by adding extra, unauthorized instructions that will be executed in a privileged mode and thus have access to otherwise unavailable information files. this is the most commonly used method for bank frauds and sabotage.[39]

The recent conviction of Donald Gene Burleson[40] in Texas has the distinction of being the first case prosecuted under a statute specifically designed to punish this type of computer abuse. The case also highlights the difficulty of trying a case of this nature. This decision is not yet reported. It is captioned Texas v. Burleson, Case No. 0324930R, Tarrant County (Fort Worth), TX. An official summary of the proceedings has been prepared by the Assistant Criminal District Attorney. That report was used in the preparation of an expanded version of this article in the possession of the author.

The most expensive example of a computer virus attack is unquestionably the Internet worm of November 2, 1988.[59] Internet is a supernetwork which connects many networks around the world. Among its users are NASA, American and Canadian universities, and two unclassified systems run by the Pentagon called ARPANET and MILNET. The accused creator of the Internet worm is Robert Tappan Morris, a graduate student at Cornell University.[60]

According to the experts, the perpetrator of the Internet worm exploited several flaws in the system.[61] He broke into the system by programming the worm to guess by trial and error the passwords of users connected to an infected computer. The worm would then use those passwords to gain access to uninfected computers.[62] Since there is no limit to the number of allowable guesses, the actor could guess at his leisure. Once entrance to the system was gained, the actor spread the worm by three of the systems's programs: the remote shell; Sendmail; and Fingerd. To initiate the worm, the attacker used a powerful programming language named "C". "C"'s language is not specific to any particular computer and therefore can be used with a variety of computers.

Worms share the virus' characteristic of being self executing and replicating but they lack the virus' destructive properties. The Internet worm occupied the memory and used a lot of processing time but it neither destroyed any data nor affected any system's operating system.[65] By failing to destroy any data, the perpetrator of the Internet collapse exploited a primary loophole in the federal Computer Fraud and Abuse Act. The Act requires that actual harm be done to the system.

The proof problems are myriad but the thorniest will be establishing proof of the authorship of the worm. According to one computer specialist, "If I were called to the stand as an exert witness, shown the code and asked if I could swear beyond a shadow of doubt that the defendant wrote it, I'd have to say no."[71]

There is also a split in the computer community as to the extent of the punishment to be imposed on the perpetrator. Some users commend the worm's creator for pointing out serious weaknesses in the network. Others consider a light punishment to be a guarantee that other worms, more spectacular than Internet's will follow.[71] The historic laxity of punishment for offenders in this arena had at least one commentator to remark, "even when guilty parties are detected, not much seems to happen to them."[72] That may have been the perception of Burleson's sentence of seven years probation. The damage done by the Internet Worm however, was exceedingly more costly and widespread. The government may want to use this case to warn potential hackers of the serious consequences of this type of behavior. Unfortunately for the government, proof of any intentional destruction will probably be much more difficult to obtain.

In response to the menace of computer viruses, Senator Wally Herger of California reintroduced, on June 14, 1989, a bill specifically designed to eliminate computer viruses. Called the Computer Virus Eradication Act, the bill would authorize a prison sentence of up to 20 years for "knowingly" planting a virus that caused "loss, expense, or risk to the health or welfare of an individual or company."

Certainly the law can provide a viable punishment for electronic information offenses. The initial defense however should be the computer professionals themselves and the measures they take to defend their systems from attack. While precautions are being taken, chances are that computers in networks will always be vulnerable to viral attack. "For the universities and research groups that use Internet as a way to quicken the snail's pace of academic publication, the speed and ease of networked exchange outweigh the risk of a virus attack."[78] As a result, computer viruses are likely to become a way of life. The law will have to adapt to keep pace.

Editor's note: This discussion is a condensation of a longer paper in which Professor Mell has reviewed the details of both the *Burleson* and the *Morris* cases. The original paper was thoroughly documented. The footnotes have been omitted for lack of space. They can be made available on request. For this reason the footnote numbering has been retained.

Professor Mell, a member of the bar of both Ohio and Pennsylvania, graduated from Wellesley College with honors in 1975 and from Case Western Reserve Law School in 1978.

Her professional experience prior to her teaching career was as Assistant Attorney • General (1978-1982) and corporations counsel in Ohio. Upon the completion of the latter assignment in 1984, she began teaching as a visiting clinical assistant professor in Columbus, Ohio. She has been teaching at Widener University School of Law for the past three years where she has taught a variety of courses, including business organizations and the substantive criminal law. Professor Mell has also taught seminars dealing with white collar crime and consumer credit.

China —
continued from page 42

a problem. In the United States, the appearance of justice is deemed to be as important as the providing of justice itself. Where the Government has an interest in virtually all things, and the lawyers work for the government, it is difficult to see how the outcome can be other than what the Government wants.

Efforts to improve the administration of justice are an important part of the overall economic development effort. This is prompted by a desire to enhance the image of china to outsiders, to provide forums for the resolution of disputes in which foreigners can have confidence and thus encourage foreign investment.

The Chinese are keenly aware that they must develop a sophisticated legal system which will lend stability to economic affairs if they are to promote continued foreign investment. It is upon this approach that the future of the Peoples Republic of China rests.

Frederick Kirch is the Clerk of the Court of Common Pleas for the State of Delaware in and for New Castle County and an Adjunct Lecturer in Criminal Justice Administration at the University of Delaware. He previously served as Superior Court Administrator.

He is a Fellow of the Institute for Court Management and has served as a member of its faculty. He has completed the requirements for an M.A. degree in Legal Studies from Antioch University School of Law and a Diploma from the Center for Management Studies at Oxford University, England.

Thomas Ralston, the co-author of this article, is also the author of the article found elsewhere in this issue dealing with high-tech in the courts.

DESIGN PARTNERSHIPS

Getting the New Space Right

Bettie Sue Cambre

Law firms are expanding and modernizing their offices in ever increasing numbers. A recent survey on law office relocation and design, conducted by Office for Law Firms/National Law Journal, disclosed that all but five of the 107 respondents, representing the nation's largest law firms, had moved or expanded their operations within the last five years. Although relocations are thought to be traumatic, inconvenient, and totally disruptive, they need not be. Rather they should be viewed as an opportunity to revise the physical work place, to update operations with new procedures and technology, and to create a new image or enhance an existing one. Faced with the challenge of such changes, law firms are turning to interior design firms to assist them through the complicated maze of options and decisions to balance visual style with functional space.

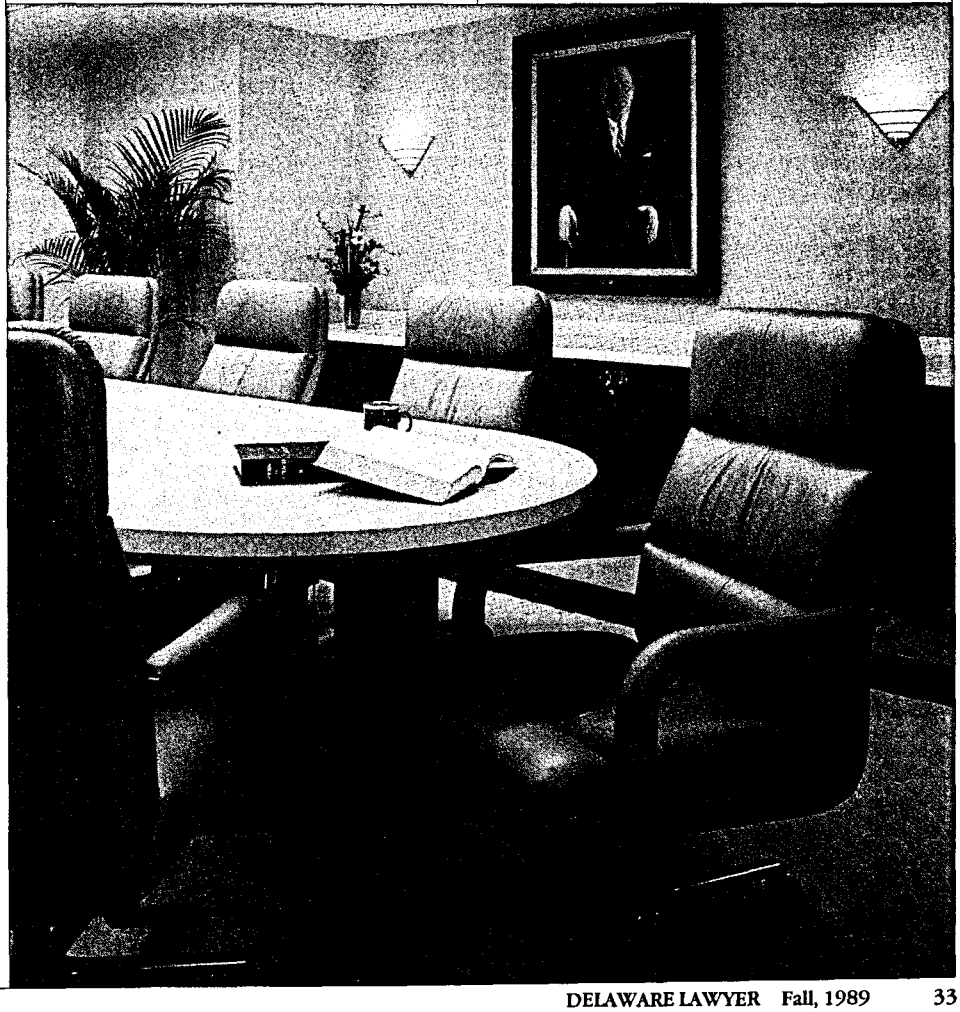
In selecting a space planning/interior design firm the decision makers should visit the firm, meet the principal designers, know who will be in charge of the project and obtain contractual assurance of principal involvement. Regardless of the design firm selected, additional consultants may be required for such specialties as legal automation, acoustics, lighting, record management, fire and life safety, and mechanical, electrical and structural engineering.

Many law firms establish project management committees to serve as project decision makers and designate one member as the administrator and liaison with the design firm, the consultants, and the contractors. It is worth noting that the committee administrator's attitude toward the project can set the tone for how design decisions are perceived by his or her colleagues. Each firm will solve the problem of project management in a slightly different way. Henry N. Herndon, Jr.,* partner at Morris, James, Hitchens & Williams in Wilmington, said that the project committee for his new office chose to divide responsibilities among partner committee members to cover all aspects of the project from furniture selection to telephone systems.

Interior designers do much more than simply create a look or image. Before beginning the actual design, many interior designers perform analyses and relocation studies comparing various potential locations in terms of usable vs. rentable square footages, and analyze and compare building "footprints," floor loading capabilities, and mechanical and electrical systems.

When a location commitment has been made, the project is ready for the programming phase, and lease negotiations begin, if they are not already under way. In drawing up the lease, building standards and allowances are subject to negotiation. Whether building standards are accepted or an allowance is established, the interior designer should be a key participant in the negotiation input of the work letter. The work letter portion of the lease defines the quality and quantity of the interior construction package offered by the landlord to the tenant and should be carefully analyzed.

Building standards define the items and the quantities of items specified in the Owner/Developer's work letter. They include partitions, basic mechanical systems, lighting, finishes, and run the gamut from minimum to maximum quality levels. If building standards can be used in a project, costs can be more easily identified and controlled. An alternative to the building standards agreement is the allowance offered by the landlord to the tenant to use as he sees fit. It may be offered as a total lump sum dollar figure or a designated dollar



* Who beams at you from the cover of this issue. Ed.

cost per square foot. An allowance is more flexible but may not fund completely the firm's desired changes. For example, heavy loads on a building's structural systems imposed by record retention areas and law libraries may require additional reinforcement of the basic building structure. Full-time air conditioning required by heavy computer use during regular and overtime work hours and sound attenuation insulation necessary for acoustical privacy are not usually part of the basic package. The partition allotment is rarely adequate for extensive private office layouts. Vertical access between two or more floors by means of internal staircases is not considered a building standard item and is a "high ticket" extra cost unless it can be included as a part of the lease negotiations.

Programming is one of the most important services design firms offer to clients. It is an information gathering process to evaluate a firm's operational procedures and is critical to the success of a well functioning office. It is estimated that businesses experience space changes at an annual rate of approximately 20%, and intelligent space planning *could* reduce this by a 5% margin. Fewer interoffice relocations result in fewer work interruptions for the staff and management, and translate into substantial annual cost savings. In the programming stage, the client and the designer have an "open dialogue" and explore all aspects of the client's corporate philosophy and project requirements including items on their "wish lists". This exchange of information is done in personal interviews, with written questionnaires, or both. The designer/programmer must know, for example, about the firm's staff size, their practice group structure, the ratio of partners and associates to support staff, and estimates for expected growth.

As the answers to these questions are analyzed and weighed, a profile of the firm and its needs emerge. The information gathered in the programming phase helps avoid expensive mistakes, determines the image a firm wishes to convey, and provides the interior designer with the creative direction for the project. It is the basis for space planning, the next step in the design process. Some firms feel confident they can execute this analysis without professional design input, but there is danger in the possibility of recreating old and inefficient patterns in a new space.

Space planning establishes the adjacencies, or physical proximities, for practice groups and support staff. The space planned creates graphic plans that illustrate the allocation of space, define circulation patterns, and identify the placement of walls and doors. These plans may also include layouts of preliminary furniture arrangements. Models, mockups, and prototypes are tools that assist in final design decisions and can provide a vehicle by which committees may "sell" the design approach to their colleagues. Secretaries, for example, can "test drive" mockup workstations, and their suggestions for functional design aspects are invaluable. Spatial schemes with attorneys' offices on the perimeter of each floor and support staff between offices and the central core are overwhelming favorites. The functional relationship of paralegals, secretaries, and attorneys should be identified. Administrative functions requiring numerous computers for word processing and accounting may require raised floors to accommodate large quantities of wiring and should be clustered together. If the administrative staff operates on extended work schedules, these functions should be located in the same area for better control of heating, air conditioning, and general security. Andrew B. Kirkpatrick, Jr., senior partner at Morris Nichols Arsht & Tunnell, noted that over the years more space has been allotted to support functions, because of the enormous amount of record and bookkeeping now associated with the practice of law.

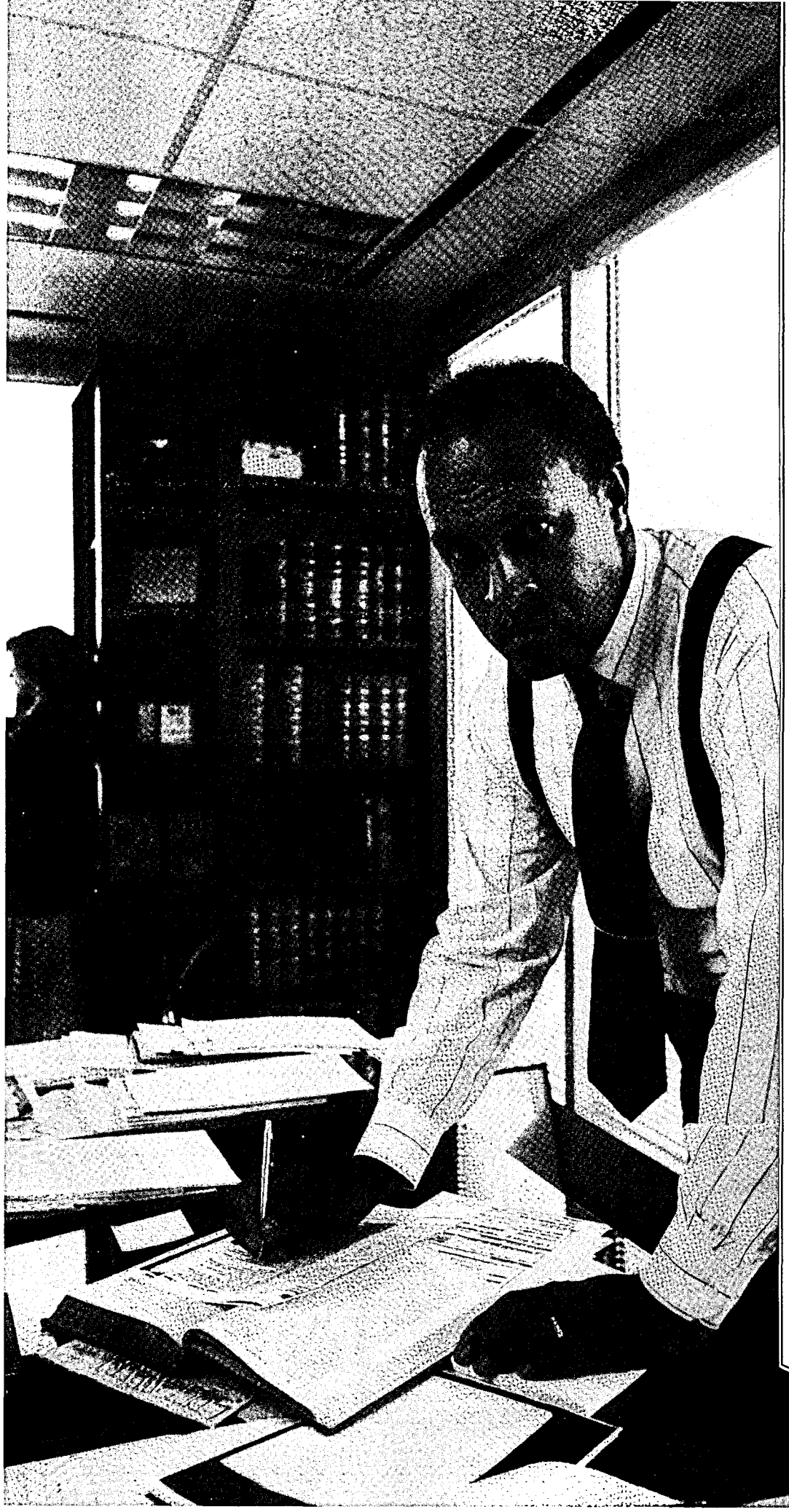
The percentage and allocation of public vs. private space depends upon the practice and philosophy of each firm. Firms whose client meetings are generally held away from the office will require smaller reception areas and fewer conference rooms, whereas a firm whose clients come to them will have very different needs. An increasing number of firms are using a conference center arrangement, clustering conference rooms of various sizes near the reception area. These clusters often share central pantries for food service, allowing conference rooms to double as dining areas. H. Murray Sawyer, senior partner with Sawyer & Akin, P.A., says he envisions informal meeting areas within partner's offices for small client meetings. "Such informal settings," he said, "would put clients at ease and provide the same privacy afforded by formal conference areas."

Although adjacency planning may seem obvious, the physical space itself may present the designer with innovative challenges. In some buildings a particular module size (the repetitive dimension established by the placement of the window mullions and columns) will dictate the sizes of perimeter offices. The building core (the central area housing elevators, mechanical rooms, airshafts, lavatories, etc.) may preclude a central location for the library, breaking up the window perimeter traditionally reserved for attorneys' offices. Delivery and office service areas at or near the freight elevator will eliminate movement of supplies and other items through occupied corridors or office areas. Lunch rooms located near delivery areas will shorten the transfer of supplies for vending machines. File or storage areas can create buffer zones for particularly noisy areas such as lunchrooms and word processing areas.

Technology has made a substantial impact on space planning of today's office. As most firms will probably increase their use of automation in the years ahead, the need to address this issue in the design of new space is critical. Firms currently moving into new offices must plan carefully for the future. As Mark McElroy of Price Waterhouse in Philadelphia stated, "For those that didn't reality will consist of prohibitive cabling costs, unsightly work areas, and the intense disruption of office functions."

It is estimated that in 1986, more than 30 billion documents were generated in the United States. Automated information systems, even with their disc storage capabilities, contribute substantially to the avalanche of paper generated daily in each office. Lawyers are all too familiar with this phenomenon and an accumulation of inactive files soon becomes a burden and an expense with records retention areas occupying an increasing number of square feet. Many firms find that manual or electronic high density filing systems conserve space in central file and record retention areas. Although designers can decide upon the location of active and inactive files, records management consultants can establish realistic storage and retrieval systems, and a consultation with one of these firms may well be worth the investment.

In large firms the proliferation of word processors, printers, and other electronic equipment has forced lawyers to give up private dining rooms and to trim square footage from lavish offices in favor of computer rooms, word processing rooms, work rooms, and more con-



At Last, A Bank That Keeps Pace With My Performance.

My profession demands a lot from me. I demand no less from my banker. I needed a banker who could keep pace with me and coordinate the necessary resources to meet my objectives. That's why I turned to Private Banking at Wilmington Trust.

I needed customized financing arrangements to suit my substantial borrowing needs. My Private Banker worked with me to meet those needs. And he can help you meet your needs, as well, whether it's helping you build your practice, buy into a new one, upgrade equipment or leverage real estate holdings. Whatever your borrowing needs, you can look to your Private Banker for financial guidance that goes far beyond the typical or the commonplace. Because you work with a team of talented professionals—professionals who elevate the service of private banking to a fine art.

For customized lending services, call my Private Banker, Halsey Spruance, at 651-8855. He created financing arrangements that keep pace with my performance, and he can do the same for you.

THE ART of PRIVATE BANKING

WILMINGTON TRUST
MEMBER FDIC

Experience the Best!℠

ference rooms. As attorneys spend more time at terminals researching precedents and drafting documents, seating and lighting become increasingly important. Movable task lights, combine with lower overall lighting, reduce eye strain from equipment screen glare and create visually comfortable working conditions. A wide selection of practical and comfortable chairs specifically designed for computer use are available in today's market, and should be carefully evaluated by the project team. Geoffrey Gamble, managing counsel at E.I. duPont de Nemours and Company, said recently that lawyers are crawling up the learning curve in computer literacy and that as far as he is concerned, electronic messages beat writing on paper. "Many lawyers," he says, "can now do research from their desks if they wish."

In law library planning, there are many factors to consider. The load bearing capacity of the library floor will determine the density of the library layout, and the total number of columns that can be accommodated. One stack of law books can weigh between 200-265 pounds per square foot. Because of this, buildings will require additional structural reinforcement and the interior designer will work with the building architect or engineer to identify problem areas.

Metal shelving will support the weight of most law books, requires fewer vertical supports, and will provide a maximum amount of available linear feet of shelf space. Although it can be clad in wood to present a higher finish, many firms prefer all-wood shelving. Shelving layouts and lighting should be designed in tandem. Good lighting should have area controls and independently illuminate stack and reading areas. Seating should be evaluated for comfort, mobility, size, and price. Particular attention must be paid to library circulation patterns to allow clear passage in and out of stacks with minimal disturbance to researchers.

Depending upon the philosophy of the firm, the library will often serve multiple uses, and the designer and client should explore the possibilities early in the programming process. Library alcoves or adjacent rooms should be designed to accommodate Lexis/Westlaw terminals and printers and include multiple electrical and telephone connections. The library should provide a comfortable working area for research and writing, and it would be a mistake to reduce the seating capacity or library amenities without considering practical alternatives and compromises such as transferring seldom-used volumes to microfiche or microfilm. Although reading from computer screens is tiring and some lawyers are reluctant to substitute the screen for the printed word, the trade-off might be worth it.

Once the space planning has been determined, the client and the designer continue to work together to develop the proper image for the firm, identifying and selecting design details such as color, wall and flooring materials, ceiling treatments, lighting, casework, furniture, upholstery, signage accessories, and art. All materials must be incorporated into the design documentation. In planning for sound privacy, for example, acoustical panels or special ceiling and/or wall materials may be specified; the design documents will specify special construction techniques required for these materials.

The identity a firm wishes to project is an important part of the design. It affects how the firm is perceived and reflects the firm's corporate culture. It will also affect the productivity and morale of the staff. Some attorneys prefer a traditional image of dark wood and 18th century style furniture; others prefer a transitional or contemporary look with clean lines and light colors. Most major design firms can develop a variety of design styles for their client.

A good designer assists the client in selecting color palette for the project. For the decade ahead, color forecasters predict that soft colors will be in vogue with bright, bold accents of yellows, reds, greens, purples and gunmetal grays. Textiles will feature strong patterns and rich textures in carpets and upholsteries. Whether or not such predictions will actually come to pass in legal design work will depend upon each particular firm's attitudes.

The palette selection is followed by a schedule of finishes and coordinates with the selection of furniture. In many firms attorneys make personal design statements by choosing their own office colors and finishes that blend with the overall office color scheme. Some firms provide a dollar or time allowance for each partner to make these design decisions.

In selecting furniture, decisions must be made whether the existing furniture can be reused and incorporated into the new environment, whether new furniture should be purchased, or whether both approaches can be combines. Cost, always the bete noir of designers and clients, tends to be the deciding factor. Existing furniture can be refinished or reupholstered and existing files and storage cabinets can be electrostatically painted with good results to match new purchases. If the decision is to go with a totally new scheme, furniture choices are too numerous to list. Whatever decision is made, it should be handled by the professional designer who will organize and coordinate all items.

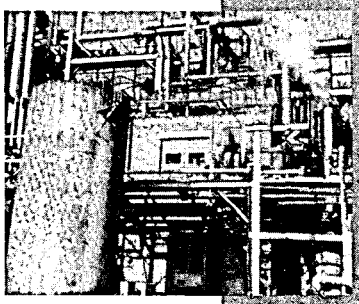
Many law firms collect art and display their collections in reception areas, conference areas, and office corridors, complementing, softening, and harmonizing the workplace. Collections that previously included only paintings have now expanded with textiles, sculpture, ceramics, and other forms of art and use special lighting and casework to enhance displays. For firms choosing not to purchase, there are many excellent options that include leasing, borrowing, and exhibition sponsorship. Many fine pieces by little known artists are available.

Today we are far more aware, than ever before, of the impact an office environment has on human attitudes and performance. With this in mind the entire design process should be approached with integrity, innovation, and creativity to provide functional elegance for the professional office.

Bettie Sue Cambre is a principal at Mitchell Associates, a Wilmington based space planning, interior and graphic design firm. She has over 20 years of interior design experience and is a Certified Contract Interior Designer, a member of the Interior Design council, and Wilmington Women in Business. Ms. Cambre is a graduate of Virginia Commonwealth University.

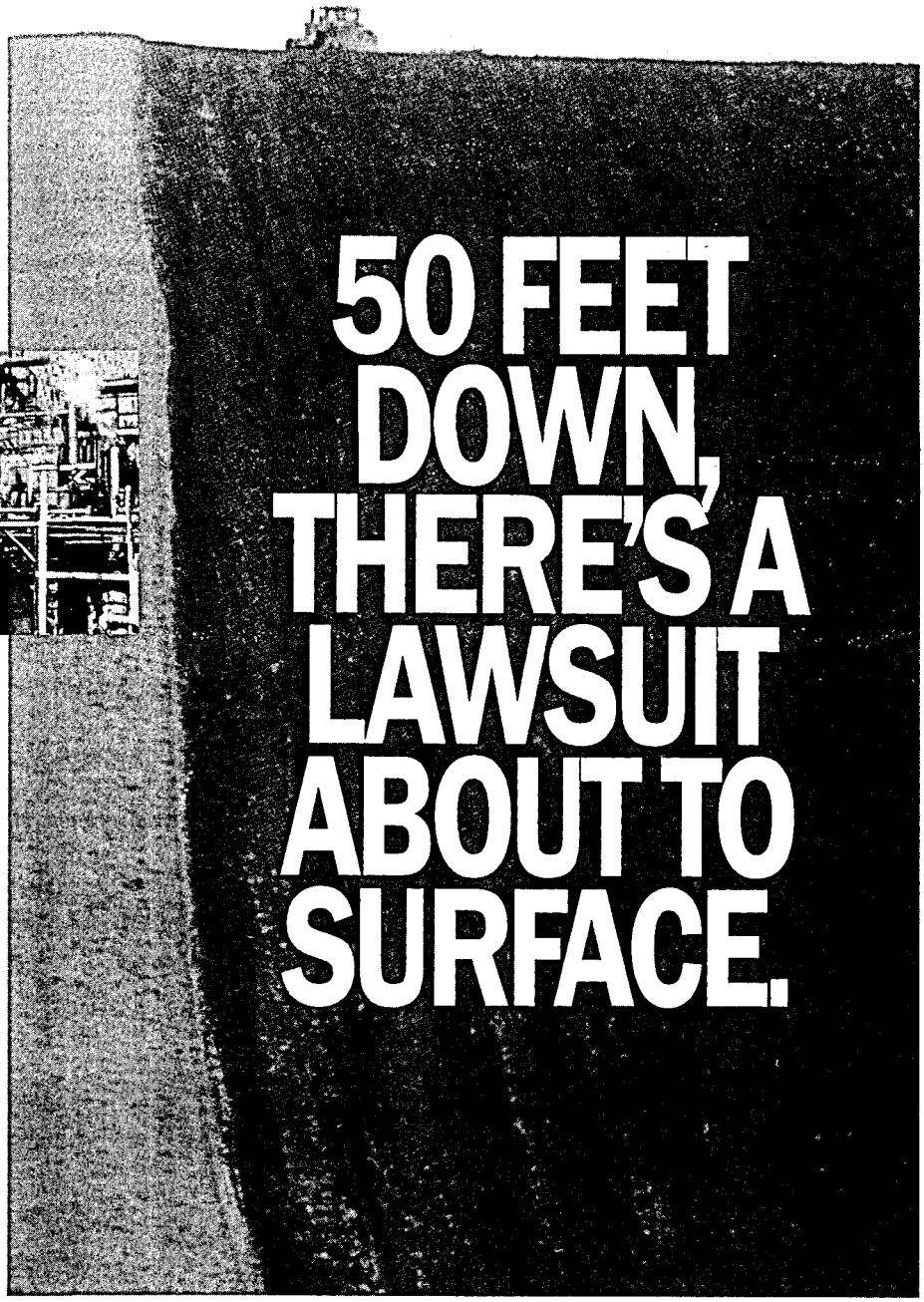
Environmental liabilities don't go away by themselves. To meet them head on, armed with the best possible resources, you should know about Groundwater Technology, Inc.

As the recognized world leader in environmental remediation, we provide total health risk assessment. Supported by in-house laboratories, Groundwater Technology, Inc., can research, design, engineer and manufacture total solutions to today's environmental concerns. Our three-phase, medically driven evaluation measures toxicity, computes exposure levels and determines risk. We specialize in real property transfer assessments, particularly state-driven programs such as ECRA. Our expert testimony is underlined by years of experience and a technical background that's respected worldwide.



Why wait for a problem to surface? Our 45 offices worldwide can prevent the threat of environmental and legal disaster right now. Call us at (215) 388-1466.

Because one lawsuit is all it takes to contaminate a very bright future.



GROUNDWATER TECHNOLOGY, INC.

World leader in integrated environmental solutions.

REGIONAL HEADQUARTERS: U.S. Route 1, Chadds Ford West, Chadds Ford, PA 19317, (215) 388-1466; **WARRENDALE, PA** (412) 935-8388; **MOUNTAIN TOP, PA** (717) 474-9693; **ANNAPOLIS JUNCTION, MD** (301) 490-4585; **VIRGINIA BEACH, VA** (804) 497-4237; **FARMINGDALE, NY** (516) 756-0707; **MERCERVILLE, NJ** (609) 587-0300

THE LEGAL SYSTEM OF THE PEOPLES REPUBLIC OF CHINA

Frederick Kirch and Thomas J. Ralston

At the invitation of the Chinese Ministry of Justice, the authors visited the People's Republic of China last year as part of a small delegation of court managers and legal professionals from 14 states.

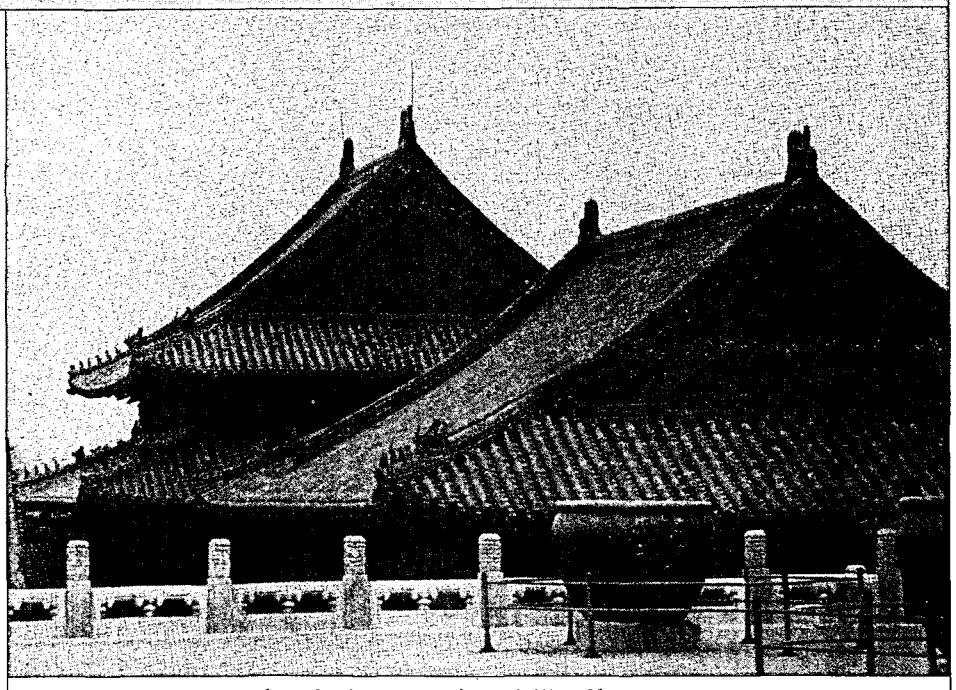
During the visit, the delegation met with judges, court staff, lawyers and Ministry of Justice officials at the national, provincial, and local levels of government. The visit included stops in Beijing, the national capitol, Xian, Chengdu, Xiamen and Guangzhou (Canton) and continued on to the British colony of Hong (scheduled to be returned to chinese control in 1997).

The purpose of the visit to china was to exchange information with Chinese officials about our respective legal systems. This occurred during meetings with relevant groups in each city we visited.

During the meetings, we had the unusual experience of speaking through an interpreter. Fortunately, we had the services of an outstanding and indefatigable individual who was fluent in English. He was an officer of the Ministry of Justice, who regularly interpreted for the Minister of Justice and the President of the Supreme People's Court, positions comparable to those of Attorney General and Chief Justice of the United States.

Because it takes time to translate from English to Chinese and back to English, the exchanges were generally lengthy and often awkward. In one instance in Beijing, the meeting was delayed while the Chinese officials identified a Chinese language counterpart for "caseflow," a technical term essential to the discussion of American legal systems. On another occasion, because we had a local interpreter who was not familiar with courts, law or legal terminology, substantive discussions of court matters became impossible.

As we traveled across the country, the style of the meetings changed substantially. In Beijing, the meetings were quite formal with only chinese spoken by the Chinese, although it was apparent that some of the Chinese officials present also spoke English. Papers on topics chosen by the Chinese were presented by delegates, and formed the bases of the following discussions.



(Forbidden City) — Zijin Cheng

Elsewhere the discussions were free-wheeling and spontaneous. toward the end of the visit, we met with law students at Xiamen University, all of whom spoke English. There the meetings were held entirely in English. It seemed that the farther away we were from Beijing, the easier it was to communicate with people. Generally, the meetings were with large groups. However, at Xiamen University there was a division into small groups for discussion.

It was often difficult for the Chinese to understand what we were saying about our way of doing things since the delegates represented many jurisdictions and each seemed to do things differently. Each time a question was asked many different answers would be provided.

Introduction

To understand the legal system of China it is helpful to have some knowledge of the history of China.

China's history spans more than three thousand years. The nation was first unified under the Emperor Qin (pronounced Chin) about 200 B.C.; it is from his name that the name China is derived and it was during his reign that the famous Great Wall was built. The Imperial dynasties continued with varying degrees of success until 1911 when the last Emperor, Pu Yi, was deposed by the Republican forces led by Dr. Sun-Yat Sen.

By 1949 after a lengthy, bloody internal struggle, the Communists defeated the Nationalists, who fled to Taiwan. From then until 1976, China was led by Mao Zedong who some feel was, in many ways, the last emperor. The fact that China had been run for many centuries by a centralized governmental authority (most recently in Beijing) helped the Communists quickly to

establish their authority over the nation.

In the early 1950's, China made great strides both economically and socially. In 1956, trouble in Eastern Bloc Communist Nations, caused at least in part by the inability of citizens to express grievances, prompted Mao to favor the "Let One Hundred Flowers Bloom" theme in which citizens were encouraged openly to express their concerns about national policies rather than take to the streets. The response was a firestorm of criticism, so violent and critical that after a few months, the program was dropped and a campaign of repression of speech and jailing of dissidents began that lasted for two decades.

In 1958, the Government announced a new economic program, "The Great Leap Forward," in which communes were formed and backyard factories started. The results were disastrous, and within a year the program was scrapped. This was the first of several attempts to address the country's economic troubles, all of which failed.

In the Spring of 1966, Mao launched the "Great Proletarian cultural Revolution" in an attempt to bypass what he perceived as an entrenched bureaucracy that was stifling the goals of the revolution. He encouraged the rise of the "Red Guards" who went on a 10-year rampage until it was put down by the Peoples Liberation Army. The cultural Revolution resulted in abut two million deaths, the deportation of about twenty million intellectuals (including judges, lawyers, professors and other professionals) and brought china to an economic, political, and intellectual standstill. Justice such as it was, was administrated by Revolutionary Committees.

During its lifetime the Cultural Revolution had destroyed much of China's economic structure, many of its religious artifacts, and most of its institutions, including the Chinese legal system.

Soon after Mao's death in 1976 the small group composed of Mao's wife and the three top government officials known as "The Gang of Four" were arrested and later tried for attempting to seize control of the Government. Their arrest and conviction provided the Government with a convenient scapegoat for the many ills that were troubling the nation.

In 1977, Deng Xiaoping became the national leader and began to chart a new political course. Deng presided over a fierce ideological struggle between the old-line Maoists and the pragmatists who felt that the country would be lost if its economic problems could not be resolved. Deng emerged as a champion of the pragmatists.

In the late 1970's, the Government began to encourage the development of tourism. People from America and other nations came in increasing numbers to visit China which brought needed foreign exchange for the acquisition of Western goods, science and technology. It also provided an opportunity for Chinese citizens, who had been insulated from Western ideas and influences, to meet people from the West.

Increasing tourism also required the development of services and resources to support it such as the building of hotels, improvement of roads, and telecommunications, all of which contribute to economic growth.

Street Scene in Xiahen

In 1978, at a meeting of the Central committee of the Communist Party, the leadership adopted new policies aimed at improving the economy. The reconstruction of the legal system, began in 1979 with a resolution adopted by the National Peoples Congress, which provided for the development of a legal court system as a national priority and the creation of new legal codes. At that time, there were no lawyers or judges in China.

Since then most of the policies adopted and actions taken by the government have been designed to bolster the new economic programs. For instance, re-establishing courts and reinstituting training of attorneys are measures designed to assure foreigners transacting business in China that agreements will be honored and that arbitrary behavior will not be tolerated.

With a population estimated at between 1 and 1.25 billion, a fourth of the world's population, the People's Republic of China is, by far, the world's most populous nation, and is growing at an annual rate of about 17.5 million persons. The economy had been plagued by the now nearly eliminated phenomenon called the "iron rice bowl" where, symbolically, all eat from the same pot a reference to the high degree of job security that had often led to poor work habits and absenteeism on the part of workers whose salaries were not tied to performance.

A variety of remedies to the economic problems are being tried, many utilizing some form of material incentive to spur productivity. Critics of these policies brand them as a drift toward capitalism. Government officials counter that the principle "to each according to his work" is wholly consistent with the fundamentals of Marxism.

Because of the economic changes, the Chinese are now finding themselves with money to purchase consumer goods, such as television sets. This demand for consumer goods has fueled inflation. Therefore, steps have been taken to slow decentralization of the economy.

The Legal System

There are four main areas of law in the Chinese legal system: (1) Criminal; (2) Civil; (3) Administrative; and (4) Economic. In addition, other areas of law have been developed to accommodate special needs: (5) Military; (6) Maritime; and (7) Railway Transportation.

The number of cases, particularly economic development cases, has grown dramatically and, ironically, the chinese are now looking at establishing bankruptcy as a new area of law.

Despite the fact that china has a tradition of laws and legal institutions dating back 2,200 years (to the Qin Dynasty), there are few statutory laws in China today. During the past five years, only thirty-seven new laws have been adopted and twentysix existing laws amended; most deal with economic development and foreign investment.

There are few laws which govern specific crimes or sentencing for criminal offenses. The laws are general and subject to judicial interpretation and application. There is not a tradition of judicial precedent in China. However, in some areas of the country, an effort is being made to assemble reports of judicial decisions.

There are three levels of government in China. each of which makes laws: National, provincial and county. The National Peoples Congress (NPC) as recommended by its Judicial Standing Committee makes laws affecting the nation. The provincial Peoples Congresses (PPC) make laws affecting the provinces (there are 26 provinces and 4 autonomous regions in china) and the County Peoples Congresses (CPC) make laws affecting the counties. County or provincial laws may not conflict with the constitution or national laws and are only applicable in the province or county in which they are enacted. The Central Government in Beijing is establishing a committee to supervise provincial and county law-making bodies to ensure that there are no conflicts of law.

The Chinese Court System

After the Revolution in 1949, the new Chinese legal system was patterned after the legal system of Russia; essentially that model is in use today.

According to officials in Beijing, the purposes of the Court System are to:

1. Punish criminals
2. Resolve disputes
3. Protect democratic leadership
4. Protect socialism
5. Protect state and collective ownership
6. Protect individual property of the citizen
7. Protect rights and interests of foreign investment and joint ventures; and
8. Educate the people to be loyal to the country.

The legal system of China is highly centralized and all participants work for the Government. The Ministry of Justice and the Supreme People's Court responsible for the administration of justice make certain that there is substantial uniformity throughout the country.

There are four levels in the court system: the Basic Peoples Court, the Intermediate Peoples Court, the High Peoples Court, and the Supreme Peoples Court. In addition, Special Peoples Courts are created as needed to deal with specific problem areas.

An important part of the court system is the Peoples Mediation Committee. There are about 800,000 of these committees located in cities and rural areas.

Supreme Peoples Court

The Supreme Peoples Court, the equivalent to the United States Supreme Court, has jurisdiction over the cases it chooses to hear. It will only hear complex cases which contain issues of substantial and national importance. The Supreme Peoples Court has appellate jurisdiction over cases from the High Peoples Court and the prosecutor's office of the High Peoples Court, in which it interprets the application of the law. The Supreme Peoples Court also supervises the work of the High People's Court and the Special Peoples Court. The President of the Supreme Peoples Court is appointed by the National Peoples Congress and reports to its Judicial Standing Committee.

High Peoples Court

There is one High Peoples Court (HPC) in each province. The HPC has original jurisdiction as prescribed by law. It has appellate jurisdiction over the Special Peoples Court, Intermediate Peoples Court and prosecutor's offices of those courts. it supervises the work of the Intermediate Peoples Court and the Basic Peoples Court and is supervised by the Central Government. As of 1987, there were thirty HPCs.

Special Peoples Court

Special Peoples Courts (SPC) hear military, maritime and railroad transportation cases. These courts convene only when needed and the system is currently being revised.

Intermediate Peoples Court

Intermediate Peoples Courts (IPC) are established in counties, provinces and autonomous regions and are supervised by the central government. The IPC has original jurisdiction as authorized by law and cases referred to it by the lower court. It has appellate jurisdiction over the Basic Peoples Court and supervises the prosecutor offices of the Basic Peoples Court. It also supervises the trial work of the Basic Peoples Court. As of 1987, there were 363 Intermediate Peoples Courts.

Basic Peoples Court

The Basic Peoples Court (BPC) is established in counties and cities according to need and population. The BPC has original jurisdiction over criminal (not including capital cases), civil, economic and administrative dis-

putes and has no appellate jurisdiction. It supervises the work of the Peoples Mediation Committees. As of 1987, there were over 3,000 BPCs.

A division of the BPC is the Dispatched Court, which consists of judges who travel to the rural areas to settle disputes. The judgment of a Dispatched Court is considered to be a judgment of the BPC. As of 1987, there were about 15,000 Dispatched Courts.

Peoples Mediation Committee

Peoples Mediation Committees (PMC) are established in villages and townships. In 1979, the Ministry of Justice created a Justice Department, which is responsible for the organization of the PMCs and the training of its members.

Each committee consists of 3-7 members who are elected by the executive committee of the township. The members must be wellknown, have a reputation for fairness, the ability to communicate and be well-respected in the community. They are usually retired teachers or military personnel who receive pensions and therefore can contribute their full-time to the committee with little additional compensation. Originally, members of the PMC were paid according to the number of disputes they resolved. The Government found, however, that members began to encourage disputes in order to be paid.

The purpose of the PMC is to resolve disputes and prevent crime, if possible. A philosophy behind the PMC is that a stable and peaceful environment enhances economic development.

The PMC also educates the people about the law and maintains high moral values. Committee members know the people in the community and the surrounding area so they can determine the reasons behind problems and attempt to resolve them before they become serious disputes. Problems which are addressed by the PMC are civil in nature (domestic, inheritance, etc.). It does not have authority to fine or prosecute criminal offenses.

One of the unique features of the PMC is the ability of its members to pursue matters on their own initiative rather than wait until matters are brought to them. PMSs have prevented suicides.

Action taken by the PMC is not legally binding. If a party disagrees with the PMC, the matter can be taken to the Basic Peoples Court. However, this seldom occurs because the support of the community encourages compliance that ensures the PMC's success.

About 88% of civil disputes are handled by the PMC with a compliance rate of about 95%. The PMC handles ten times the number of cases processed by the Basic Peoples Courts, which reduces their caseloads significantly. Statistics indicate that disputes have decreased by about 24% since the implementation of the PMC concept.

Criminal Offenses

When a person is suspected or accused of a crime, the matter is investigated by the police. If the police are satisfied that there is enough evidence against that person, an arrest warrant is issued by a judge or the procuratorate, which is the prosecution arm of the law enforcement section.

For major offenses, the accused is detained in jail pending further investigation. For minor offenses, the accused is not detained. There is no bail system in China.

After an investigation, the police will refer the matter to the prosecutor's office which will interrogate the accused, conduct further investigation, and conduct a preliminary hearing. If the prosecutor finds the evidence is insufficient, he may return the case or continue to investigate the matter.

After the preliminary hearing, the accused may retain a defense attorney. Since substantial investigation of the crime is conducted prior to the involvement of the defense attorney, the prosecution is convinced at that point of the suspect's guilt. However, when asked the question of whether an accused is presumed innocent until proven guilty as in the American system, the Chinese reply was that there is no presumption of innocence or guilt; that the facts will determine guilt or innocence.

The prosecutor and defense attorney are both government officials. Prosecutors do not need a law degree. They are chosen by the Bureau of Justice and must be members of the Communist Party.

If the defense attorney should attempt to disprove the evidence in the case, it would be considered an insult to the government, the attorney's employer, and an inference that the prosecutor and police did not conduct an adequate investigation. Therefore, 88% of the defendants are convicted by the courts.

Most crimes are tried before the Basic Peoples Courts. The case may be appealed to the Intermediate Peoples Court. Procedural errors may be appealed; however, the court will also review the facts of the case in making its determination. There is an automatic appeal of convictions in capital cases.

What are considered to be crimes in America, such as theft, are considered offenses in china. Offenses are punishable by fines. However, if a person is a habitual offender, he may be committed to a "re-education camp" for a substantial period. This is a labor camp where the inmate is required to perform manual labor and write self-criticism papers.

If a case goes to trial, it is because the prosecution is convinced of the person's guilt. The trial then is to educate the public rather than determine guilt or innocence.

Motor Vehicle Violations

There are fewer than one million motor vehicles in China. The cost of acquiring one is such that fewer than 1,000 households in the entire country are thought to be able to afford them. The cars function either as taxis or vehicles for officials or collectives. They share the roads with buses, trucks, animal drawn carts (horses and water buffaloes) and 400 million bicycles. They, the buses and trains are the most common forms of transportation. The combination of animals, bicycles and motor vehicles makes driving in china a difficult if not hazardous undertaking.

Motor vehicle violations are not handled by the courts, but by the police. the violator is informed of his offense and fined on the spot. The violator must pay his fine immediately or his driving license is taken away. If he pays immediately, he is given a receipt for payment and that is the end of the matter.

If the violator cannot pay, his driving license is taken and his employer is notified of the violation. The employer or the violator's family will usually pay the fine. The violator is required to write a self-criticism paper before he can regain his driving license.

Violators do not argue with the police, and until recently, could not appeal a traffic violation. Now, a traffic violation can be appealed to the Basic Peoples Court. However, very few violations are appealed.

Legal Personnel

All legal personnel work for the government including: lawyers, assistant lawyers, chief judges, assistant judges, prosecutors, court clerks, court police and clerical staff.

Lawyers and Assistant Lawyers

The practice of law was restored in China in 1979. There is a great need for lawyers since the few practicing lawyers are estimated at 30,000, minuscule in relation to the population, and greatly overworked. For instance, there are about 30 million people living in Shaanxi province, they are served by only 840 lawyers. These figures are typical. (In comparison, there are about 1,600 lawyers in Delaware for a population of about 650,000).

Lawyers practice under the jurisdiction of the Provincial Bureau of Justice which handles the licensing of lawyers and regulation of the practice of law. They do not have to be members of the Communist Party. Each governmental entity (city, county, and province) determines who will be lawyers subject to the approval of the Bureau of Justice. About 10% of China's lawyers are women. The Bureau of Justice sponsors seminars for the continuing education of the lawyers and reviews cases to determine the quality of the lawyer's work. Bar Associations have recently been established; they work with the bureau of Justice in the regulation and education of lawyers.

All lawyers must have a law degree; it is like an American 4-year bachelors degree with emphasis on law. The graduate must then serve a 2-year apprenticeship as an assistant lawyer, a role equivalent to that of the American paralegal. When the apprenticeship is completed, the assistant lawyer becomes a lawyer. There is no bar exam.

Large law offices usually specialize in specific areas of law; small offices do not. These offices collect nominal fees which are set by the bureau of Justice. An average divorce costs 30 Yuan (approximately $10). All fees are applied to the expense of operating the law office. Any funds above costs belong to the office but are not distributed to the lawyers. If a law office does not meet its expenses, the government provides a subsidy. Lawyers are encouraged to "moonlight" to make extra money; another example of "free enterprise" in operation in China.

An interesting development that relates to the focus on economic development is the ability of an office to opt out of the governmental subsidy in favor of self-financing. This allows the office, after meting its expenses, to distribute the "profits" to the members of the firm. Under such an arrangement, lawyers in the Southern areas of the country, where much of the economic development is going on, may become quite prosperous.

The director of the law office is elected by the lawyers in the office but must be approved by the bureau of Justice. Retirement and termination of office personnel are handled by the Bureau of Justice.

Chief Judges, Judges and Assistant Judges

Selection of the Chief Judge who reports to the County Standing Committee must be approved by the County Peoples Congress. The Chief Judge chooses the judges and assistant judges with the assistance of the Bureau of Justice.

Most judges are appointed after graduation from a university. A person does not need a law degree to be selected as a judge. Some persons are appointed as judges from other areas of employment, and need not be members of the Communist Party; although most judges are.

Most judges become acquainted with the law while they are serving judges. They receive "on-the-job" training and are required to study law in their spare time or participate in training courses. Judicial education is an important concern in China and educational programs are currently under development.

Assistant Judges handle files and do research for the judges. An assistant judge is an apprentice judge who serves as such for 2 years before becoming a judge.

Consistent with the philosophy of communism, there does not seem to be a hierarchy of status among judges, lawyers and prosecutors.

Conclusion

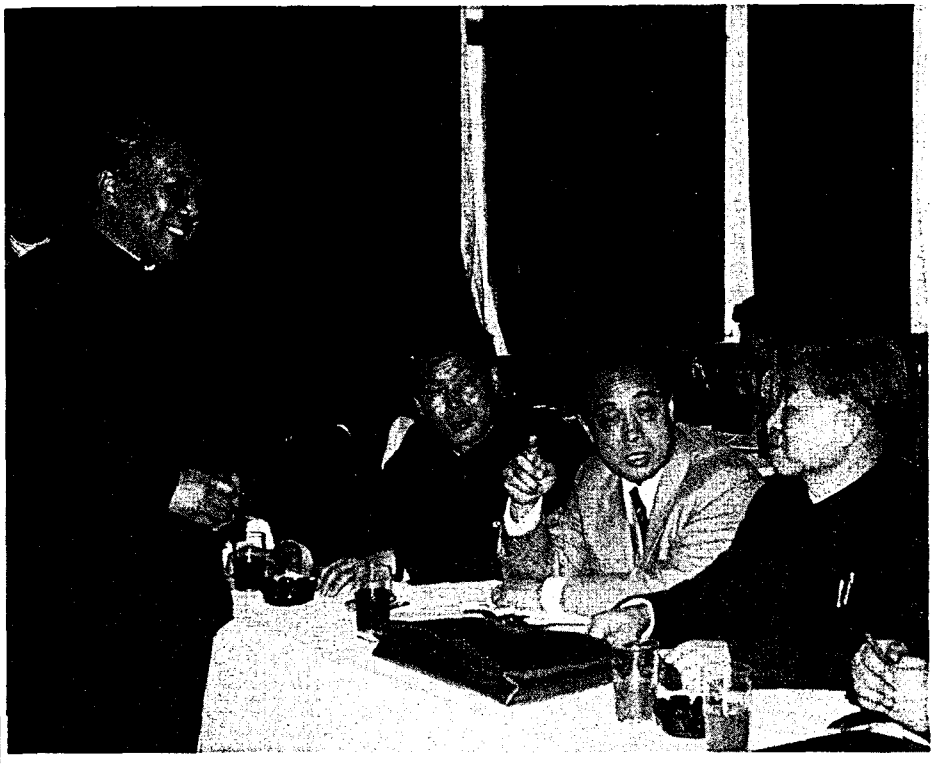
The foundation of the Chinese legal system rests upon the Peoples Mediation committee. But for the existence of the committees, which are somewhat analogous to alternative dispute resolution (ADR) mechanisms (now being adopted in America as a measure to relieve congestion in the courts) the Chinese court system would be swamped with disputes.

The PMCs are able to go far beyond what is done by ADRs in America. If Committee members hear about a problem in the making, they can move to resolve it almost before it begins.

Members of the committees are chosen for their reflection of community values and their respect in the community and are thus able to intervene in ways that almost always ensure early resolution of disputes.

All legal personnel including lawyers are employed by the Government; this is

Continued on page 32



Judge Wang and Court Officials

INTERPOL MOVE OVER

Representatives of S & H Enterprises, a firm of private investigators headquartered in Newport, Delaware, whose message appears in these pages, attended a September meeting of the World Association of Detectives in Queensland, Australia. The Association gives S & H access to a worldwide network of specialists in investigatory problems. According to account representative Frank Gilcken, S & H is well equipped to provide services across state and national boundaries.

John E. Slagowski, President (left) and Frank Gilcken, Acct. Rep. (right)

Rob Young, left, and Steve Crifasi stress personal service as the key to their agency's success.

crifasi AND young
REAL ESTATE

Residential Real Estate Sales
New Home Sales and Consulting
Land Acquisition

(302) 984-4545

Twin Lakes Center 4007 Kennett Pike, Suite B Greenville, Delaware 19807 REALTOR®

SMITH
ALFA ROMEO, LTD.
DELAWARE'S ONLY AUTHORIZED DEALER
NEW YEAR SAVINGS

ALFA
- *SALES*
- *SERVICE*
- *PARTS*

SPIDERS
(CONVERTIBLE AND HARDTOP)

2.5 + 3.0 LITER MILANOS
(5-SPEED AND AUTOMATIC)

SMITH ALFA ROMEO, LTD.
4304 KIRKWOOD HWY.
WILMINGTON, DE. 19808

302-994-ALFA

DM Collections...
AT YOUR SERVICE

SPECIAL PROCESS SERVICE
(no service, no fee)
&
EXTENSIVE SKIP TRACING

plus
Collection of Past Due Accounts
Help in Collections

OUR PROFESSIONAL SERVICES
- ***FREE YOUR TIME***
- ***INCREASE YOUR PROFITABILITY***
- ***REDUCE YOUR LOSSES***

Help is only a phone call away.

D.M. COLLECTIONS, INC.
P.O. Box 1343 Wilmington, Delaware 19899-9911
(302) 792-9695

Member: NCC Chamber of Commerce, American Collectors Assoc., Seaboard Collectors Assoc., N.A.P.P.S.

THE 8½ GOLDEN RULES OF BUYING PROFESSIONAL LIABILITY PROTECTION

1 YOU GET WHAT YOU PAY FOR. If price is your only consideration, skip the next 7½ rules.

2 WRITE YOUR OWN POLICY. A great professional liability policy protects *you* and *your* company and everything that's unique and different about *you*. We never forget this.

3 ALL CARRIERS ARE NOT CREATED EQUAL. Like the wind, some carriers come on strong, then blow out to sea. Others are consistently dependable. Our professional liability carrier, American Home/National Union, earns the highest rating in the insurance business. You can't do any better.

4 DON'T PAY FOR WHAT YOU DON'T NEED. The key to reducing premium costs is knowing the possible problems you might face. We can adjust coverages to reduce your premiums. We do it every day.

5 ALWAYS LOOK BACKWARDS. If you don't have our "prior acts" coverage, you could be in trouble for something that's already happened.

6 NEVER UNDERESTIMATE YOUR COVERAGE. In today's market, there's no such thing as almost right. Better to have more coverage than less. We can provide up to $20,000,000 each claim/aggregate for lawyers and $15,000,000 each claim/aggregate for accountants.

7 MAKE SURE YOU GO WITH AN ADMITTED CARRIER. The state protects you by reviewing *their* financial strength, policy forms, and rates. A non-admitted carrier may need more protection than you do.

8 EXPERIENCE COUNTS. Everything you've been told about experience is true. You can't beat it. We know from experience. Fifty years of it.

½ IF YOU BUY PROFESSIONAL LIABILITY INSURANCE, BETTER NOT DO IT BY HALVES. Give us a toll free call right away.

J50 A HALF CENTURY OF SERVICE

HERBERT L. JAMISON & CO.
345 Park Avenue South
New York, N.Y. 10010
300 Executive Drive
West Orange, N.J. 07052
(201) 731-0806
(800) 223-6155 within N.J. or
(800) 526-4766 outside of N.J.

YOUR KIND OF PEOPLE

YOUR KIND OF BANK

WSFS V.P. and Relationship Manager Bob Shadduck with Jim Healy, President, The Healy Group, Inc.

CONESTOGA TITLE INSURANCE CO.

I'm interested. Tell me about your free-loan video training series for my staff:

- ☐ "The Closing". What happens at a settlement (from the attorney's point of view).
- ☐ "Murphy's Law of Conveyancing Real Property" An award-winning* video to help avoid settlement problems and losses.
- ☐ "Conestoga Quiz". A discussion-starting centerpiece for training sessions or review.

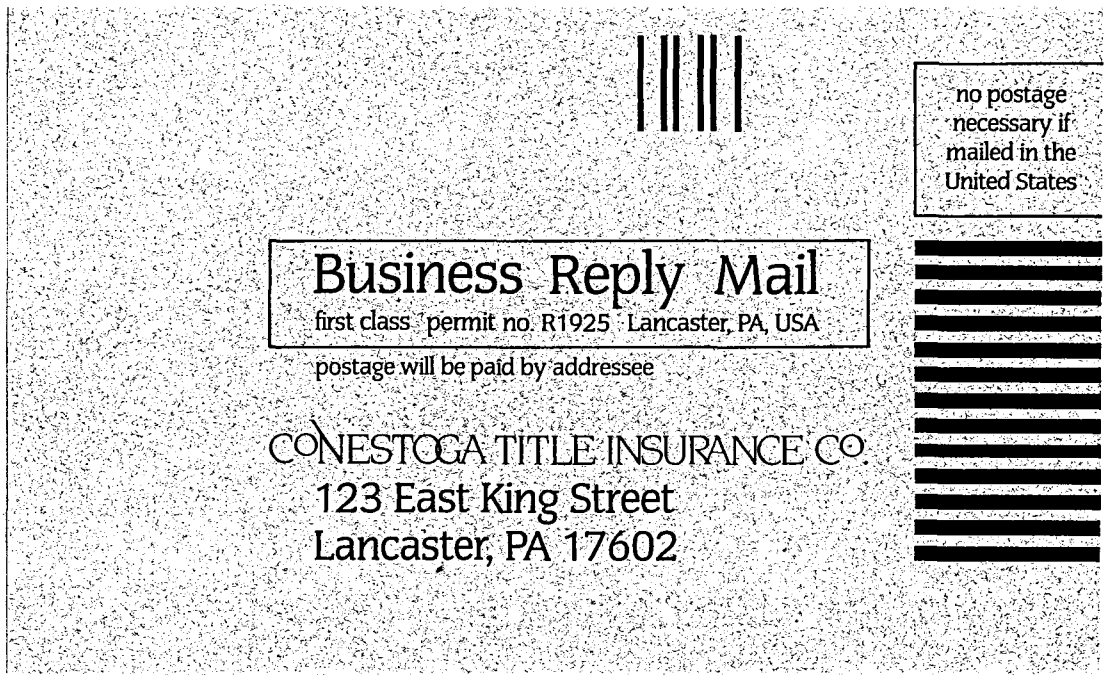
NAME _____

FIRM _____

ADDRESS _____

CITY _____ STATE _____ ZIP _____ PHONE ( ) _____

*Gold Cameron Award, Lancaster Ad Club 1988



no postage necessary if mailed in the United States

Business Reply Mail

first class permit no. R1925 Lancaster, PA, USA

postage will be paid by addressee

CONESTOGA TITLE INSURANCE CO.
123 East King Street
Lancaster, PA 17602

Westlaw won Shea & Gould over with research advantages that

Jean O'Grady
Associate/Director of Legal Information Services

Clifford Thau
Associate
Shea & Gould
New York, NY

we couldn't afford to ignore."