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# WHAT COMPUTER SUPPORT SHOULD A JUDGE HAVE?

YOUR COMMENTS ARE WANTED ON SOME PROPOSED GUIDELINES

## WESTLAW LAWPRAC INDEX

### JUD -- Judicial Management, Process & Selection

### COA -- **Court** Automation: Computer Hardware & Software

Why should judges be interested in computers for themselves? Because the caseload demands it and because judges will do a better job if their operations can be made more efficient. It is not enough that the **court** system has automation. Judges and their staffs also need the tools to deal better with their responsibilities. The purpose of these proposed Guidelines and Recommendations Relating to Computer Support for Judges is to provide information that can help judges decide what hardware and software to buy and that can serve as an objective standard on which to base discussions of computer need. These Guidelines and Recommendations were designed by judges for judges—and were produced by the National Conference of State Trial Judges Technology and the Future of the **Courts** Committee.

Society is often reluctant to provide funds for **court** services proportionate to the case-volume increases. Anyone working in the **courts** knows how inadequate resources are— whether lack of personnel or poor equipment—and how difficult it is to obtain additional funding. Although there may be resistance, computer \*18 support for judges, if used effectively—with good equipment and training—can be cost effective.

Congestion in the trial **courts** has been compared to an urban traffic jam in which more cars try to get onto the highway than leave. It is a frustrating, time-wasting exercise in which all parties suffer from delay, delay, delay. To add to the aggravation, in criminal **courts** speedy-trial laws mandate judges to push the case accelerator to the floor and drive faster—but offer no solutions for how to do so in the middle of a gridlock. Speedy trials, of course, should be everyone's goal, but we need remedies, not empty rights.

On the civil side, case filings continue to increase, complicated by criminal cases being given priority and by mass torts that clog dockets. Despite efforts to divert cases from the trial process through means such as no-fault automobile insurance, arbitration, and sanctions for refusal to settle, backlogs continue to grow.

At a minimum, judges and **court** staff must be given the tools to deal better with the practical problems of managing a docket. The legal profession in general and the judiciary in particular have been slow to take advantage of changes in technology, unlike the medical profession. Although many **court** systems are managing their dockets through the use of technology, the overwhelming majority of individual judges work in offices that have no more sophisticated equipment than an electric typewriter, a dictating machine, and a telephone.

Many functions of the trial judge are particularly well suited for automation. Opinions are often drafted and redrafted a number of times, a task greatly simplified by word processing. Likewise, judges frequently issue similar orders and sometimes cover similar points in different opinions. These, too, lend themselves to automated word processing. Jury charges or instructions also can be organized easily through word processing.

Judges today deal with a large volume of cases, and computers are particularly designed to deal with case management and tracking. Both spreadsheets and data base management systems can assist in various aspects of analyzing, organizing, and retrieving information about cases.

Lawyers universally have easy access to data base research such as Lexis and Westlaw. While many judicial libraries provide access to these research tools, very few judges have access to them from their chambers. Exchange of computer programs and other information through electronic mail is rapidly increasing with the creation of bulletin boards such as the National Judicial Network. The future will see jurisdictions with their own internal data bases of opinions, regulations, and other items. At some point, all the cases within a given jurisdiction will become available each month on laser disks, called Compact Disk Read Only Memory (CDROM).

Technology has solved many problems for clerks, technical staff, administrators, and probation officers. Judges have not yet benefited. While there will be problems with learning the applications, the costs of a minimum system are nominal when compared to the overall costs of maintaining a single judge with support personnel and facilities.

Reasonable computer access for the judiciary is imperative to allow judges to meet the increased demands placed upon them. Routine tasks must be facilitated to allow judges to devote their time to the business of decision-making. A relatively small expense can advance the efficiency of the process while maintaining its fairness and effectiveness.

After a year of review and consultation with legal computer gurus across the country, the Technology and the Future of the **Courts** Committee of the National Conference of State Trial Judges approved Guidelines and Recommendations Relating to Computer Support for Judges.

This report consists of three parts:

1. General guidelines for computer support for judges;
2. Specific *minimum recommendations* for acquisition of hardware, software, and training support for judges; and
3. Specific *recommendations* for acquisition of hardware, software, and training support for judges.

Since technology is progressing at a rapid rate, these guidelines and recommendations must be constantly reviewed and updated.

## **GENERAL GUIDELINES**

In addition to computer support for a **court** system, individual judges should have computers in their chambers to assist in the performance of their judicial duties. Judges should have full-featured word processing, access to computer research through Lexis or Westlaw, a calendaring program, a data base program, a spreadsheet program, appropriate utility programs for backup and other functions, and other programs appropriate for their specific needs. They should have a printer with at least good near-letter-quality type. Judges and their staff also should have adequate training to enable them to utilize the capabilities of the computer.

## **\*19 RECOMMENDATIONS WITH COMMENTARY**

### **PART I. MINIMUM SUPPORT**

#### **1.1: Minimum Hardware for a Trial Judge**

A trial judge, at the minimum, should have access in his or her chambers to:

- (a) a micro computer;
- (b) 640 kilobytes of RAM;
- (c) a 20-megabyte hard disk;
- (d) a floppy disk drive;

- (e) a monochrome monitor with a graphics board;
- (f) parallel and serial ports;
- (g) a printer; and
- (h) a 2400-baud external modem (Hayes compatible).

### **Commentary**

There has been a drastic reduction in the cost of computer hardware in recent years. The minimum hardware outlined above can easily be obtained for less than \$2,000.

The minimum support recommended is for hardware that is more than “a rock bottom minimum” that would improve efficiency for a judge. For example, just a dedicated word processor, available for less than \$1,000, would enable a judge to handle opinions, standard orders, and correspondence. Likewise, a personal computer system with two floppy disk drives rather than a hard drive could execute word processing and many other programs that serve a judge's needs far better than just an electric typewriter. However, the difficulties in usage and learning time for computers without a hard disk drive make such a purchase a false economy.

For several reasons, no one specific operating system is recommended. The need for personal computers for judges is so great that a computer with almost any operating system is better than nothing. Another reason is that technology is changing so quickly that today's recommendations are good only for the moment. Even the recommendations made in this article in late 1989 may be out of date within months.

Different jurisdictions may opt to go with different systems for their own reasons. The key should be the ability to get training in a particular system and, secondarily, to ascertain what systems other judges and lawyers in a jurisdiction are using. For example, if other judges nearby use an MS-DOS system (the system used by the older IBM PC-XT and PC-AT machines), that would be a reason to opt for an MS-DOS system. If there are a number of Macintosh users in an area, then MAC may be the machine of choice.

Because the MS-DOS operating system is the most common system in use in 1989, it is expected that many judges will prefer to use this type machine. The range of specialized software for MS-DOS—and the expertise of others in the community who have used MS-DOS and can render assistance to judges starting to develop a computer system—often makes it the first choice. Some of the details of the commentary and standards are addressed to judges who use the MS-DOS operating system for IBM-XT compatible and IBM-AT compatible systems.

In general, the MS-DOS system hardware and software will probably cost less than that of other systems. Because it dominates the legal and business markets, there are many discounts available, not only in the initial purchase of the machine but in add-on hardware and in software. Unfortunately, many **courts'** systems are bound by purchasing requirements that may escalate the cost. However, particularly in urban areas, IBM-compatible computers are available from a variety of manufacturers that have been highly recommended by analysts in the field. Some are made by smaller, less well-known manufacturers, but others are made by well-established companies. The support of the particular vendor for a particular machine (set-up, technical assistance, and repair) varies from location to location. Before purchasing any system, it helps to have a knowledgeable person or consultant to assist in the purchase.

In any event, compared to many other expenses required to maintain a judge, the cost-benefit ratio of any computer makes automation a real bargain.

There are many in the legal field as well as in other fields who swear by Apple's Macintosh computers. If a **court** system chooses to use the MAC as its computer, and if users will have others to talk to, that is a fine choice. MAC is making more of an impact in the legal field since WordPerfect (the most widely used word-processing system in the legal field) has come out with a version for the Macintosh and since Macintoshes can be enhanced to read MS-DOS programs. The advantages of the MAC include ease of the initial learning stage and excellent graphic capabilities. Disadvantages are that it is not as easy to get inexpensive software and additions to the machine; the experienced user may be slowed down by the "icon" system; there may not be "off the shelf" software for particular applications; \*20 and there may be fewer users to talk to in a jurisdiction.

The Recommendations do not rule out the new IBM-OS/2 system of the new IBM-PS/2 machines and their clones. Although the jury is still out, this may become the dominant operating system in the future. It should be noted that a consortium headed by Compaq is planning a rival system. Another option is the Unix system, an operating system that works with mainframes as well as microcomputers. However, although the legal market is still dominated by MS-DOS systems with well-priced clones, other systems are acceptable if a judge will not be "alone" with his or her system.

The Recommendations do not specify the type of processor used nor the clock speed of the computer. In the MS-DOS family, even the slower IBM-XT type 8088 processor speed would meet the minimum standard. For many other fields, this slower speed would not suffice in today's world. Also, in the future new programs may not run on the 8088 chip. However, because judges generally will be using the computer for word processing and the manipulation of relatively smaller amounts of data, the minimum recommendations do not require the faster speeds now available. Moreover, since there are so many 8088 machines in use, it is likely that most needed programs will support the 8088 chip for at least several years. Although the cost is not significantly more for faster machines, there is enough of a cost differential to make a difference.

A monochrome monitor should meet most needs of all but those judges who must generate numerous reports. Most MS-DOS computers come with a Hercules-compatible graphics board to enable the user to view graphics and alternate fonts. If your computer system does not have graphics capability, a graphics card can be purchased for about \$50 and is recommended. Macintosh also has graphics capabilities.

Parallel and serial ports are necessary to connect a printer and modem. Likewise, a surge protector is an absolute necessity to protect the computer from power surges. A clock/calendar is helpful and generally comes as standard equipment on all but IBM machines.

The Recommendations do not endorse a specific kind of printer. While a laser printer is optimum and combines both speed and high quality, until recently the high cost put it beyond the reach for "minimum standards." However, there has been a recent price break in the Hewlett-Packard laser printers for IBM-compatible machines, and they may soon be in range. For the moment, a dot-matrix printer will suffice. They offer high reliability, high speed in draft mode, and flexibility. It is important to see that the near-letter-quality typeface is as good as possible. Since 24-pin printers have dropped in price, they generally provide better quality text and should be considered. While a minority view favors "daisy wheel" printers for their typewriter-quality text, fewer lawyers are purchasing them because of their slow speed, reliability problems, and the decreasing gap in price with lasers.

A modem offers the opportunity to communicate with data bases and other users through telephone lines. The most immediate need judges have for a modem is to access legal research systems such as Lexis and Westlaw. Another use is to communicate with others in the justice system electronically (through electronic mail), which is just starting to become important. A modem also permits almost instantaneous transmission of documents and other files to another computer with a modem through telephone lines. Users can also access bulletin boards and leave messages or retrieve public-domain software. The American Bar Association's ABA/Net services the bar. The National Judicial Net, sponsored by the National Judicial College, is establishing local "nodes" around the country to provide for a nationwide exchange of ideas and software. Although a 2400-baud external modem is about 50 percent more expensive than a 1200-baud modem, the extra cost should be quickly made up because of savings in connection charges to the legal research systems and other phone charges.

Although many programs run with 256 or 512 kilobytes of RAM, because of the small additional cost for increased RAM and the increasing amount of RAM used by the newer software programs, the standard sets forth 640 kilobytes as a minimum, with the thought that anything less is false economy.

As noted, a hard disk drive facilitates both the learning process and the use of various programs. Because of the relatively small cost of larger disk drives, they are recommended, and a 20-meg drive should be considered a bare minimum.

The 5.25-inch, 360-kilobyte floppy disk drive has been the standard for the IBM-XT family. Disks generated on this drive can be used in most MS-DOS-type machines. The IBM-AT and clones use a 5.25-inch high-density drive that holds 1.2 megabytes of data. Disks created on these drives can be read by XT-type machines only if they are formatted for low density, 360-kilobyte drives. As time goes on, there will be a shift to the 3.5-inch diskette used by the Apple Macintosh and the IBM PS/2 computers. However, on a minimum system the 5.25-inch, 360-kilobyte drive should suffice.

## **1.2: Minimum Software for a Trial Judge**

A trial judge, at a minimum, should be supplied with:

(a) a high end, comprehensive word-processing package that includes a spell-checker with a legal dictionary; capacity to move text easily; merge functions; footnote capability; and the ability to create an index, outline, and table of authorities;

\*21 (b) a data base manager program;

(c) a spreadsheet program;

(d) legal research software for access to Lexis or Westlaw;

(e) communications software;

(f) note-taking and personal calendar software;

(g) utilities software to conduct computer file management, to back up data, to restore lost data, etc.; and

(h) jury instructions for the jurisdiction on a data base.

## **Commentary**

Word processing will be the primary use in a judge's office. Although there are many inexpensive, public-domain commercial word processing programs available for little or no cost, they are only adequate for limited uses. Judges will quickly want the power of a more sophisticated, widely used word processing program. Our recommendation is for a full-function word-processing program geared for legal work, such as WordPerfect 5.0, fast becoming the standard for the legal profession. Since WordPerfect 5.0 is widely used by MS-DOS users (and is now available for the Macintosh), it offers users the advantage of sharing the same system with fellow users, which can be handy when a problem occurs. WordPerfect 5.0 also offers extensive documentation and toll-free telephone support. Although Wordperfect and similar programs retail for approximately \$500, they are

available through many vendors for less than half the list price. In addition, in many instances discounts are available for multiple users and for governmental use.

A simple, nonrelational data base should be adequate for the normal filing and retrieval work done by judges. Because of the time involved in learning the more powerful and complex systems, they are not the recommended choice for the average judicial office. Systems such as Q&A and PFS File and PFS Report should be sufficient unless the judge anticipates the need to do a great deal of file manipulation. If that is the case, a more sophisticated data base, such as dBASE III + or Paradox, should be considered.

Spreadsheet programs will be helpful in analyzing case statistical records of dispositions and sentencing patterns, as well as performing other tasks. There are a number of systems on the market that are adequate for most judicial uses. Lotus remains the most commonly used, and there are a number of specific judicial overlays for that system. Excel and Quattro are other widely used systems. The key to selection should be the price of the system and the availability of others who know the software to help in training and problem-solving.

One of the great conveniences of a computer in a judge's chambers is access to legal research. Normally, commercial legal data bases such as Lexis and Westlaw will make software available at nominal cost. This will enable the judge and his or her staff to use the legal research systems from the convenience of the chambers rather than from a communal terminal. It also allows the transfer of research cases to disk to facilitate integration of longer quotations without having them retyped.

There are a number of communications software packages available. Some, such as the widely used ProComm, is "shareware" (requiring a small contribution) that can be obtained from other users or downloaded from computer bulletin boards.

Likewise, there are a number of inexpensive "pop-up" commercial and private-domain programs that are adequate for personal calendaring and note-taking. WordPerfect supplies these functions and others (calculator, file manager) in a program called the WordPerfect Library, which is frequently used by lawyers.

There are a number of utilities that help manage the files on a hard drive. They include programs to copy and delete files, programs that automatically back up your work on the hard drive, and programs to restore files accidentally erased. Some are commercial programs, and others are available in the public domain. Fastback and Norton Utilities are among the leading commercial products.

It is vital that computer users "back up" their data and systems. Very few users have not been in the situation where, because of power problems or some other reason, a hard disk drive "crashes," making all the data unusable. Certainly, all of the systems should be on floppy disks as well as on the hard drive. In addition, judges should copy data such as opinions, orders, and caselists onto floppy disks. All judges (and all computer users) should make a complete copy of what is

on the hard disk onto floppy disks periodically. Programs such as Fastback are designed to do this relatively quickly. This is all that is recommended for most judges who are managing only their own cases. If, however, a judge is running the entire **court** list for a county, the floppy disk backup is not sufficient. Those judges must have a tape backup system that automatically copies everything from the hard drive periodically—for example, every night when the system is down.

One of the programs that should be of help to all judges is an automated jury instruction program. The **court's** standard instructions should be provided on disk to each judge, who can then make his or her own modifications. While standard jury instructions can simply be typed onto a word-processing system. It may also be helpful to have the instructions and commentary accessible on a data base manager program for quick access.

### **1.3: Minimum Training for Judges and Judicial Personnel**

The training time required to learn how to use the computer programs is as significant an investment as purchasing the hardware and software. \*48 Training programs must be established that deal separately with the needs of judicial staff and the needs of the judge. Different judges will have different inclinations to become involved with technology. Training programs must have enough flexibility to provide the minimum education for secretaries, law clerks, and judges while enabling those with more of an interest to further explore the uses of the computer.

#### **Commentary**

The need for training cannot be overstated. The person with “hands on” responsibility for using the computer should be determined at the outset. It may be the secretary, law clerk, or the judge. Judges, at least, should be made aware of the capabilities of the computer and be encouraged to try the various functions. Judges who use Lexis or Westlaw should have little trouble using that function of the computer. However, unless there is an organized training program to assist personnel in taking the first step to use a computer, the equipment may remain unused. The psychological barriers must first be overcome; then enthusiasm will usually carry over as the user learns about additional applications.

Computers can only go so far in assisting judges to carry out their basic function: deciding cases. Learning new systems can be very time consuming, and the cost-benefit ratio should be considered. Sometimes it can take more time to establish a complex system for dealing with a simple problem than it would take to do it manually. However, in word processing and many other tasks, computers can free the judges and their staff from mechanical tasks to concentrate on the business of judging. In \*49 the business world, experts advise that when assessing cost, training should be considered to be from one-fourth to one-third of the total cost.

## PART II: RECOMMENDED SUPPORT

### 2.1: Recommended Hardware for a Trial Judge

In addition to the minimum hardware listed above, unless financial resources are unavailable, the following improvements and additions are recommended to provide for the needs that will develop as technology is further utilized by judges:

- (a) if on an MS-DOS system, a computer with at least an 80286 chip (AT or compatible);
- (b) a 40-megabyte hard disk
- (c) 1 megabyte of RAM;
- (d) a clock;
- (e) both 5.25-inch and a 3.5-inch floppy disk drives;
- (f) an EGA or VGA monitor and video card;
- (g) access to the **court** system's central computer, either through modem or by a card with hard wiring to the system;
- (h) access to a laser printer;
- (i) computers or terminals to provide access to the judge as well as the judicial staff, and portable or home-use computers for those judges who will take advantage of them.

### Commentary

Prices for faster machines have been dropping. As more and more functions become automated, greater use will be made of computers that can run more complex programs at higher speeds. Future software programs and networked systems may work only with 286 machines. Therefore, to plan for the next several years, the extra cost of a faster machine using an 80286 chip is recommended, unless financially impossible. Although the latest generation of computers is the 386 machine, because of the price differential, the 286 machine should be fast enough. Most judges will not be manipulating large amounts of data, so the additional speed will make little difference in most tasks.<sup>a</sup>

Although initially it may seem that a 20-megabyte hard drive will last forever, new programs and accumulated data quickly fill it up. Since the cost differential is not dramatic, a 40-megabyte system is recommended.

New programs are consuming more and more RAM. Therefore, although 640 kilobytes is still the standard, at least one megabyte of RAM is recommended, with the capability of adding more as programs take more and more internal RAM memory.

Most computers come with a built-in clock. If they do not, this is a minor expense and is recommended.

Both the new IBM PS/2 systems and laptop computers use 3.5-inch disks pioneered for the Macintosh. In the MS-DOS world, it is very convenient to have an additional drive to be able to transfer files from a hard drive or 5.25-inch drive to a 3.5-inch drive, or from a 3.5-inch drive to a 5.25-inch drive. This may be more important in future years.

Most 286 machines come with a high-density, 5.25-inch, 1.2-megabyte -floppy drive. That drive particularly makes it easier to do a mass backup of a hard disk on floppies. If the computer does use the 1.2-meg drive, it is recommended that the judge acquire software to generate 360k compatible disks. In that way, work can be done on the 286 machine and then taken to another less powerful machine, perhaps the judge's computer at home.

As discussed in the minimum recommendations above, judges responsible for maintaining the official data for a jurisdiction will find it necessary to use a tape for more frequent mass backup rather than just periodically backing up the hard disk onto floppies.

**\*50** If judges or **court** staff will be generating graphics and reports, the color capabilities of an EGA or VGA monitor and card are a worthwhile but somewhat expensive enhancement. The Macintosh is especially geared to graphics and desktop publishing uses.

In the future, many judges will find it convenient to have access to the main **court** computer. Some systems can be accessed by modem, while others need to have remote terminals hardwired into the system. If the budget allows, wiring and a card to allow access to these systems is recommended.

While it is not required that each judge have his or her own laser printer, for important documents and reports, the high speed and quality of a laser is often desired. Therefore, the individual judges should have fairly easy access to laser printers located throughout the **court** building.

Initially, a single computer may serve a judge and his or her staff. However, as judges make wider use of the computers, it may be desirable to have more than one computer for a judge and the judicial staff. For those judges who make extensive use of computers, it may be appropriate to provide a computer for home use or a laptop computer suitable for both courtroom and home use.

## 2.2: Recommended Optional Software for a Trial Judge

In addition to the minimum software listed above, certain judges may be able to make use of additional programs if they have a need to produce reports for the jurisdiction and if financial resources are available. These programs could include:

- (a) a graphics program:
- (b) desktop publishing; and
- (c) statistical software.

### Commentary

Although the need varies from judge to judge, many judges are charged with responsibility for administration and reporting on the disposition of the cases heard before them. For these presiding or other judges, software programs such as graphics programs, desktop publishing, and statistical programs may be useful. The complexity and expense of these programs vary and should be assessed in conjunction with a computer expert.

## 2.3: Recommended Training for a Trial Judge

Training for all hardware and software must be provided as outlined in Section 1.3 above.

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### Footnotes

- <sup>a</sup> **Author's Note:** Since the original drafting of these Recommendations, there has been a price break in the production of the 8386 microprocessor. Therefore, this should be considered as an alternative to a 286 machine.

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