WORD PROCESSING
IN THE
COURTS

National Center for State Courts
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Introduction

This monograph is intended to assist court managers and analysts in understanding word processing technology and in working out a set of planning and implementation guidelines. A review of the court applications for word processing is presented first to assist in assessing a court's need for this technology. Sufficient information on the various types of hardware and software capabilities and applications available is included in Section 2 of Part I to explain some of the unique terminology used by manufacturers, consultants, and word processing specialists. The reader will also learn how to conduct a "systems approach" assessment of word processing technology. To this end the following steps will be reviewed:

1. Determining the information processing requirements and deciding what types of word processing equipment will fulfill these requirements most efficiently and economically
2. Establishing the proper procedures for evaluation and acquisition of word processing equipment—in particular, specifications, standards, guidelines, and methodology that should be followed in the evaluation and procurement of word processing equipment.

Although the general methodology and process of analysis in the "systems approach" are in principle similar for both data and word processing, different criteria, priorities, and analytical techniques are used in the evaluation and acquisition of word processing technology. This monograph will not compare particular models or manufacturers of word processing equipment, but will evaluate all the functions and capabilities now available. The word processing industry and services are changing so rapidly that such analyses would be quickly outdated. There are currently several sources of up-to-date information on word processing: commercial reports, technical expertise at the National Center for State Courts, and other court consultants. Some of the materials in this report are extracted and modified from two previous reports: Courts Equipment Analysis Project Report, Business Equipment and the Courts: Guide for Court Managers, and the SRS report, Automated Information Systems Planning and Implementation Guidelines.

It is hoped that this book will fill a long-felt need of court administrators for a reference work and guide to the field of word processing with the special needs of courts in mind. It was undertaken jointly through a grant from the Bureau of Justice Statistics and a project of the National Center for State Courts, and was subsequently revised to keep abreast of rapidly changing developments in word processing technology.

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PART I
Deciding whether a word processing system is the answer

SECTION 1
Court applications for word processing

Modern word processors can produce almost any type of printed documents. The crucial issue is whether using word processors for the type of information a court expects to enter and the documents it produces is more efficient and effective than using standard typewriters or more sophisticated data processing computers.

Word processors are particularly advantageous for certain types of court documents, but provide only marginal improvements for other types. Rarely will a court install a word processor for a single application, except, perhaps, a large court with a high degree of job specialization. In most courts, word processing should be employed for an assortment of uses.

The applications that will make word processing useful to appellate courts differ somewhat from those most needed in trial courts because of the differences in the nature of the work. Appellate courts expend effort in drafting, revising, and publishing opinions; indexing cases by subject matter; monitoring submission of transcripts and briefs; preparing for oral argument; and maintaining budget and accounting information. Trial courts have similar needs in maintaining indexes and calendaring cases, but their heavy needs are for lists (attorneys, jurors, defendants, etc.); filling out large numbers of forms (summonses, warrants, subpoenas, juror notices, witness notices, attorney notices); and processing of case records.

Unfortunately, there is no formula or concise method of determining precisely the cost-effectiveness, cost-benefit, or suitability of a specific class of equipment for the courts. The performance needed from a word processing system will determine the choice and combination of equipment, the functions sought, the kinds of court personnel skills that must be developed, and the reactions of court personnel to the new technology. The potential production volume, the type of documents to be produced, and the service needs should be related to the cost, efficiency, and productivity of the word processing equipment being considered.

Assessing the suitability of word processors for meeting court needs

The various applications needed can be separated into two groups according to the functions the word processing equipment must perform in order to produce the kinds of documents needed in the courts. The first group includes all those text-editing applications that are involved in the production of manuscripts, fill-in forms and letters, standard documents, and ordinary correspondence and memoranda. The second group comprises case tracking and processing, for which the word processor must be able to produce lists, indices, calendars, statistics, and tickler files. Each will be discussed in turn, along with the word processing capabilities required for each.

Text-editing and forms production

Manuscripts

Manuscripts are documents (longer than five double-spaced pages) that normally will require extensive editing and rewriting. Usually the final copy must have no typographical errors, and may be used for extensive photocopy reproduction. Some manuscripts may be updated periodically over a lengthy period.

The following types of court documents would usually be classified as manuscripts: opinions, complex orders, manuals and regulations, administrative reports, studies, handbooks, and transcripts.

Manuscripts are an excellent use for word processing equipment. They meet most criteria for both effective and efficient use of this technology: frequent retyping of the same document; a significant amount of text to be revised; lengthy documents; error-free final copy; high-quality printed copy; documents complex in content and format; and substantial variety of documents. In some cases, the documents must be typeset, which can be done directly from the word processor floppy disk.

Standard fill-in forms and letters

These documents contain standard text (usually 80-90 percent of the printed content remains unchanged) except for some personal or case-related information such as names (parties, case, and lawyers), case title, address, and date(s). (See page 4 for an example.) Usually, the printed copy will have official or legal significance and will be used frequently.

The following types of court documents fall into this category: notices, orders, form letters, jury notices, and subpoenas. They can be economically produced on a word processor in three ways:

Precising page blank
The form or letter and superscripting processor are applicable when the following types of documents may fall into the "boilerplate" category: jury instructions, complaints, presentencing reports, and probation reports. The productivity rate for these documents will vary tremendously according to the degree of standardization and the amount of modifications and insertion of additional non-standard text. If more than fifty percent of the text must be revised, this approach should be reconsidered or revamped.

Correspondence and memoranda.

These documents usually are short (one or two pages) in length and are typed with no or minimal revisions. The word processing operator can store the document and correct obvious typographical errors before producing the final copy.

The least efficient use of most word processing equipment is the production of general correspondence and memos; these should be a secondary, not the primary, purpose for obtaining word processing equipment. Authors who are careful about the content and form of such documents should seriously consider an electronic typewriter or personal computer, not the more expensive word processors.

**WORD PROCESSOR CAPABILITIES NEEDED**

The following capabilities are considered desirable for all text-editing and forms-generation applications that require full-time operation of the word processing equipment:

- **Storage Medium**: Floppy diskette
- **Printer Speed**: 40-50 characters per second
- **Input Terminal**: Keyboard with cathode ray tube (CRT)
- **Features and Capabilities**:
  - Automatic centering
  - Automatic line spacing
  - Automatic page numbering
  - Automatic pagination and repagination
  - Backspace error correcting or stripeover
  - Block move/copy
  - Continuous-paper-feeding device (for manuscripts, document assembly/merge (fill-in forms, form letters)
  - Deletion
  - Dictionary/glossary phrase insertion (for boilerplate documents)
  - Document assembly/merge (fill-in forms, form letters)
  - Dictionary-oriented files (for manuscripts)
  - Global search and replace
  - Headers/footers
  - Horizontal scrolling
  - Queuing of several documents for printing search
  - Simultaneous printing/editing of different documents
  - Stored and default formats
  - Sub- and super-scripting
  - Vertical scrolling
  - Word wraparound

These required functions for full-time operation dictate that court managers should look at word processors in the medium and higher price ranges to secure satisfactory performance. If the workload is not great enough to require full-time operation, a personal computer that offers most of the capabilities may be adequate.

Additional text-editing features and capabilities that would be helpful but not absolutely necessary are the following:

- **Automatic widow/orphan adjustment**
- **Justification**
- **Hyper-tiling: hot zone and scan**
- **Automatic footnote/tail note**
- **Records processing software**

**Records processing and case tracking**

Records processing is among the more recent enhancements available in many word processors. Courts with small or medium-size caseloads may find it cost-effective to evaluate word processing equipment for the use described above and at the same time study the feasibility of performing records processing on a small scale on the word processor. A rule of thumb for deciding whether the case volume is appropriate for a word processor would be the ease with which the statistical reports needed for case management and resource allocation purposes can be easily or quickly on a word processor, but if their manual preparation is no problem, then a word processor may be considered a viable alternative.
processor can probably handle a court’s records processing and operational case tracking needs.

Records processing software capabilities enable the more sophisticated word processors and microcomputers to perform some complex data processing routines traditionally accomplished on larger data processing computer systems. Word processors now can maintain a computer database that provides comprehensive information, reduces duplication of data, and also permits rapid entry and retrieval of information in order to satisfy a variety of needs. Each manufacturer’s records processing package contains a software program that automatically handles the organization, cataloging, location, storage, retrieval, and maintenance of the data for each record. Most of these packages have simplified methods enabling non-technical personnel to enter, update, inquire, retrieve, and print any or all information contained in a specific record or an entire file (a group of related records).

The database can be used to produce a variety of reports, listings, indices, statistics, and tickler files. In addition, selected pieces of information in particular case records can be merged into other documents to produce various forms and notices.

Records processing software that is employed primarily for case-tracking and monitoring information can also be used for several other court applications, such as equipment inventory, court personnel records, and attorney lists.

Compared with the larger data processing systems available, the records processing software packages available for almost all standalone word processors and minicomputers and for many shared-resource word processors presently available have limitations in the following areas:

- Data entry verification and error checking
- Size of the database (i.e., the number of characters of information for each record, the number of fields of information contained in each record, or the total number of records or total characters of information that can be stored and manipulated)
- Speed and means of storing and accessing the information
- Computational power and data manipulation capabilities (e.g., limitations on how records are selected and sorted, making both software and hardware slow and cumbersome)
- Methods of updating records and producing reports
- Number of auxiliary files available

On the other hand, records processing packages for word processors do not require computer programmers, and they permit court employees to learn, operate, and maintain a computer-type data system easily. Some systems offer glossary capabilities that do not require the operator to write instructions to perform fairly complex data sorting functions.

Court managers must recognize that it takes substantial planning and processing resources to develop and operate adequately any case record information system. The purpose and the size of court databases vary so widely that both productivity gains and cost savings are difficult to estimate.

The court must properly review and analyze the information requirements to determine:

- Precisely what pieces of information must be collected.
- How this information should be represented in the database (abbreviations, codes, full text).
- How the information will be accessed, modified, and indexed.
- How rapidly inquiries must be answered.
- How cases should be stored, grouped, and accessed.
- What types of operational reports must be produced and distributed and in what format and frequency.
- Whether statistical reports are needed for case management reports (beyond the capabilities of word processors).
- How accurate and up-to-date the information must be.

Generally, the larger the database and the more intricate the data analysis and reporting requirements, the bigger and more powerful the word processing systems needed. If larger capacities are needed, the court can acquire larger storage media (e.g., larger, rigid "Winchesters" disks) and larger computer memories. On most word processors, however, both software and hardware limitations will remain. Word processors that can handle records processing and case tracking will not provide the data processing capabilities needed for producing statistical reports for case management purposes.

Many courts that use records processing software on their word processors have underestimated their requirements—particularly the number of fields of information needed for each case and the number of cases that ultimately must be processed and analyzed. They have also overestimated the word processor’s capacity and capabilities, particularly the speed and flexibility of accessing information and producing listings.

To assure adequate system responsiveness and satisfactory performance, certain database characteristics are necessary in the use of most word processors for records processing, as follows:

- No more than 400 to 500 characters of information in each record
- No more than 40 to 45 fields of information in each record
- No more than 2,000 to 2,500 cases in a single file
- A separate file on a large disk or on a separate floppy disk for each major type of case category (civil cases or subcategories thereof, criminal cases or subcategories thereof, etc.)
- One computer (CIT) available for every 800-2,000 active general jurisdiction cases; or for every 2,000-5,000 active limited jurisdiction cases

If the court wants to manipulate records to produce statistical reports of any kind, applications such as glossary-writing capability are needed that permit the computer to select multiple fields at a fairly rapid speed. If these applications on the word processing software are slow and cumbersome, or cannot handle the volume of work projected, they may not be as cost-effective as software applications that would be available on a data processing computer.
Development of word processing

Although an outgrowth of the computer industry, word processors were developed as a separate type of office equipment rather than as an extension of existing data processing systems. The purpose of word processing systems was to automate the production of much of the paperwork in an office. Often, the major difference between the first word processors and electric typewriters was the magnetic storage and text writing capabilities provided by the word processor. The magnetic storage capability allowed the typist to store and recall documents for revision, thus eliminating much retyping. The text editing capability allowed the typist to correct any errors and to make editorial changes more easily—text could be removed, added, or restructured. Form letters, previously requiring many hours of repetitive typing, could now be typed once and automatically merged with a mailing list to produce personalized letters. Although the early word processors offered limited error-correcting and storage capabilities in comparison with today's word processors, this was still a major step forward in automating the office.

Throughout the 1970s, data and word processing systems usually existed in the office as separate entities with little interaction. In the 1980s, this trend is away from this single-task approach to office automation toward integrated office systems that serve both the word and data processing needs of an organization.

Distinction between word and data processing

It is important to understand the differences between word and data processing when selecting office equipment. Word processing is the creation and editing of text—e.g., correspondence, manuscripts, and instructions. Data processing is the manipulation of numerical information—e.g., processing a payroll, managing records, and forecasting trends. Storing, retrieving, and manipulating information in words, data processing involves mostly numbers. With the move toward system integration, the distinction between word and data processing applications is often unclear. "Software" packages to handle tasks such as statistical analysis, records management, and lengthy mailing lists have been introduced by word processing vendors. These tasks were previously considered data processing applications. As a rule, such packages are most successfully used on word processing systems with large memory and storage capabilities. Many word processing manufacturers have introduced word processing software for their computer systems, with more sophisticated hardware found on the larger computer systems. Word and data processing software packages vary widely in their effectiveness and should be researched thoroughly before purchase.

Word processing system components and software capabilities

A word processing system consists of hardware and software. Hardware consist of physical devices: the central processing unit, the keyboard, the video display unit, the storage device, the printer, and the optional special-purpose equipment. The hardware components for single-task word processors (referred to as dedicated systems) and integrated systems are the same. Software is composed of the stored instructions that make the hardware function as a word processor. The following diagram illustrates a word processing system and its components:

Central processing unit

Data received from the keyboard, other input devices, or storage are processed and sent to a printer or other output device. The central processing unit controls the entire system, the logic unit, and the storage unit.

The central processing unit interprets instructions so that the proper operation takes place. The operations are carried out by logical or storage units. The logic unit handles all logic decisions. The storage unit, which is also referred to as the primary memory, stores the instructions received from the input device.

A video display unit is an important consideration in the size and expandability of the memory. Generally, systems with larger memory offer a greater range of capabilities. Expandability of the memory is an important design feature of word processors. With expandable memory, it is possible to broaden the range of capabilities by increasing the memory size and adding more sophisticated software.

Keyboard

The keyboard, which is the primary input device of a word processor, resembles a standard typewriter keyboard. In addition to the standard keys, there are special keys for activating the word processing functions. Some systems use labeled function keys such as "delete," "insert," or "replace" to indicate the appropriate keyboard key to press. Other systems use mnemonics in which a code key is pressed in conjunction with standard keys to activate functions (e.g., code key and "del" or "ins").

Cathode ray tube (CRT)

A video display unit attached to the keyboard enables the typist to view the text on a TV-type screen before the document is printed. Typists locate changes to be made with a movable cursor and enter the appropriate editing commands with various function keys. The revisions take place in the central unit and then appear on the screen immediately. The visual display of text speeds up the editing process by eliminating the need to return to a printed copy of the document to make the revisions.

Disk storage

Disk storage is the secondary or auxiliary storage unit of a word processor. This device consists of two parts—the storage medium (disk) and the disk drive, which records and reads information on the disk. The most popular media types at the present are flexible ("floppy") diskettes for small word processing systems and rigid ("hard") disks for multiterminal systems.

A diskette is a mylar disk encoded in a cardboard protective cover. These range in size from 3.5 to 8 inches in diameter and can contain from 15 to more than 100 pages (60K to more than 200K) of information. A rigid disk, which is a more durable storage medium than a diskette, ranges in size from 5/4 to 14 inches in diameter and can contain from 200 to more than 700,000 pages (1 MB to more than 600 MB) of information. Rigid disks are available as removable and nonremovable (fixed) disks. Small multi-terminal systems are often used with a combination of removable and "floppy" disk storage devices. Larger multi­terminal systems, because of space requirements, rely less on "floppy" diskettes and often use a combination of nonremovable and removable disk storage devices.

Prospective purchasers of word processors should be aware of the incompatibilities in the way vendors store information on disks. Few word processing manufacturers store or retrieve information on the disk in precisely the same manner, nor do they adhere to standard methods of coding, as data processing manufacturers do. Information cannot easily be exchanged between different vendors' disks. Thus, it becomes very important to select a word processor that can be expanded as needs change or increase.

Printer

The printer, which is the primary output device on a word processor, produces the "hard" or printed copy of the information typed on the keyboard. The two types of printers used with word processors are impact and nonimpact printers. Impact printers use a striking mechanism and a ribbon to create the characters; nonimpact printers use some other method (such as ink jet or laser) to create the characters. The most commonly used printer for a word processing system is the line printer, which prints text at speeds ranging from 500 to 600 characters per second (CPS). These printers offer a variety of line styles and are available in wide-track or twin-track. The wide-track printer allows the printing of documents of more than 200 characters in width (more than twice the width of normal letter paper), and the twin­track printer has dual print elements for specialized applications.

In installations where there is a high volume of printing, larger and more expensive printers are sometimes used. Because of the relatively poor quality of
The result, these printers are used primarily for draft copy. Matrix printers print several hundred characters per second, and line printers print several hundred lines of text per minute. Matrix printers are more available that can be used for both letter quality and high-speed draft printing. However, the quality sometimes lacks the crispness of the daisy or thimble printer. Two types of nonimpact printers, laser and ink jet, are being used with increasing frequency on word processing systems.

### Optional hardware

Paper-handling devices

Automatic sheet feeders and envelope feeders can be attached to printers to provide unattended paper feeding. These devices feed new pages or envelopes, position it, eject it after printing, and insert the next additional form. Information available on some feeders are collation, automatic pagination, and page trays for various paper sizes. A forms tractor and pinfed platen are other devices used for automatic paper feeding. These require the use of continuous form paper with perforated holes punched in a perforated margin for automatic feeding through the printer. Letterhead stationery, envelopes, and standard forms can be mounted on continuous form paper for use with tractors and platen feeders.

Data-communication devices

Hardware can be added to word processors so that data from one type of medium can be transferred to printers to provide unattended paper feeding. These include the ability to transmit documents at rates exceeding the speed of a typewriter. The ability to feed documents that have already been typed on a word processing system. Secretaries using typewriters can now type documents that have already been typed on a word processor.

### Telecommunications

Telecommunications and electronic mail

Telecommunications is a term used to describe the communication between compatible word processing or data processing systems within an organization or using telephone lines. Telecommunications capability can be added to most word processing systems by purchasing additional hardware (hardware components and software). This hardware and software, information can be transmitted by telephone from a word processing system to a computer, another word processor, phototypesetter, or other device. This process is now being used to transmit daily correspondence, contracts, and other business documents to create new documents. Also refers to the merging of telecommunications and word processing systems. Laser printers burn images onto a cylinder, and ink jet printers spray ink to form the desired character. Laser printers can print up to 100 pages per minute, and ink jet printers can print about 100 characters per second. Laser printers produce excellent letter-quality printing, but the present technology is considered complex, costly, and unreliable.

The print quality on the ink jet printer is less desirable, but it is lower in cost and more reliable.

When an office is upgrading from a magnetic card system to a disk system, the printing process can be converted to a direct printing system. The only change may be that the printer has been replaced with a laser printer. The result, these printers are used primarily for draft copy. Matrix printers print several hundred characters per second, and line printers print several hundred lines of text per minute. Matrix printers are more available that can be used for both letter quality and high-speed draft printing. However, the quality sometimes lacks the crispness of the daisy or thimble printer. Two types of nonimpact printers, laser and ink jet, are being used with increasing frequency on word processing systems. Laser printers burn images onto a cylinder, and ink jet printers spray ink to form the desired character. Laser printers can print up to 100 pages per minute, and ink jet printers can print about 100 characters per second. Laser printers produce excellent letter-quality printing, but the present technology is considered complex, costly, and unreliable. The print quality on the ink jet printer is less desirable, but it is lower in cost and more reliable.

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System configurations

There are three general configurations for word processing systems: standalone, shared-resource, and shared-logic. The following factors should be determinants in selecting configurations:

- **Location of the components.** Are the components to be located in a central facility, distributed throughout a building, or in several different buildings?
- **System capabilities.** What capabilities, storage capacity, and memory size are needed?
- **System expandability.** What are the future needs of the system? Does the court anticipate adding workstations or other devices? Is it possible to add components to the system or to expand the memory for greater capabilities?
- **Access to special devices.** Are some of the system components to be shared by more than one workstation?

**Standalone**

A standalone is a single-terminal word processor that contains all the hardware necessary for an operator to work independently of any other system. Standalone systems are selected most often by the single-terminal user who sees no immediate or projected need for more than one terminal. However, even for the multi-terminal user, the location of terminals may necessitate the selection of standalone word processors. In most multi-terminal systems, components are connected by the central processing unit. If the distance between the terminals makes it impractical or impossible to connect the devices to a central processing unit or if the traffic would be too burdensome for the operators, then standalone systems should be used.

**Shared-resource**

A shared-resource word processor is a multi-terminal system in which each terminal has its own central processing unit but shares other components. Standalone systems with shared resource capability can be connected to printers, storage devices, or special-purpose equipment. This usually results in better utilization of the shared equipment.

**Shared-logic**

A shared-logic system is a multi-terminal word processor in which the terminals share the central processing unit as well as other system components. Courts that initially used a multi-terminal system or are interested in replacing a standalone or shared-resource system with a more powerful system should consider a shared-logic system. When these components are shared, the shared logic system provides for more efficient use of the shared components. Shared logic systems may also provide a wider range of capabilities, more storage capacity, and a faster operating speed than standalone or shared-resource systems. Terminals can usually be added to a shared-logic system. In this way, the shared logic system at less cost than required for purchasing additional standalone equipment or adding terminals to shared-resource systems.

The basic price of a shared-logic system is substantially higher than that of a standalone system, but the cost per workstation is substantially lower than a comparable number of standalone word processors.

The following diagrams illustrate standalone, shared-resource, and shared-logic configurations.

**Typical standalone system**

**Typical shared-resource system using standalone systems**

**Typical shared-logic system**

**Types of word processing systems**

After the need for a word processing system has been determined, a decision has to be made whether to select a low-cost personal computer, a single-task word processor, or an integrated word and data processing system.

**Personal computers**

Although this monograph is primarily about dedicated word processors, there are many situations in small courts where the less expensive personal computer may be adequate. These computers are used for word processing, legal research, word processing, accounting, and file management. The principal drawback of a personal computer is that it is not very reliable (although it is available if the purchaser wishes to pay for it), and the user manuals require some time to master. If, however, cost is an important factor, good personal computers are available for as little as $3,000.

**Integrated system**

This type of system is potentially more complex than selection of a dedicated system. The process involves separating the work to be done by the word processors and the data processors. The systems are called integrated systems. The decision is made on the basis of cost and the capabilities that are required. Costs may be greater than if the two systems were separate, however, the resultant system is more efficient. The processing is divided into word processing and data processing, and the users are more specialized. The data processors are more specialized in one type of processing and are less likely to be burdened by other tasks. However, the word processors are more versatile since they can perform tasks that are not available to the data processors.

**Dedicated word processors**

Dedicated word processors range from electronic memory typewriters to large multi-terminal shared-logic systems. The following tables illustrate the features, magnetic media, components, and software associated with dedicated word processors. The reader should study the figures carefully to obtain a comparative view of dedicated word processing systems.

Another issue that arises in the selection of an integrated system is the responsibility of those who will operate it. In many systems, both the data and word processors are managed by one manager. It is often difficult for both data and word processing personnel to agree on a particular system. Often, the system with good data processing capabilities will have marginal word processing capabilities. Systems that satisfy both the data processing and word processing requirements are essential. Otherwise, the responsibility will be with one manager, that individual must understand the needs of both the data and word processing operations.
The optimum use of the system can only be achieved through good management. The following tables show the standard features to be found in dedicated and integrated systems, personal computers, electronic typewriters with text-editing capability, standalone or shared-resource systems, and shared-logic systems.

### Comparison of dedicated and integrated systems

**Dedicated word processors**
- Word processing capabilities are usually highly developed.
- Range of optional hardware is usually extensive.
- Limited data processing capabilities are sometimes provided.

**Integrated word processors**
- Microcomputers are usually less expensive than dedicated word processors.
- Word processing software for microcomputers is purchased separately and is usually not as powerful or as easy to use as the software on a dedicated word processor.
- Range of optional hardware is usually extensive.
- To obtain word processing capabilities comparable to those found on the larger dedicated systems usually requires the purchase of a microcomputer, which is larger and more expensive than a microcomputer.
- Because system hardware is multifunctional, it may be less expensive to purchase an integrated system than separate word and data processing systems.
- Integrated word processors offer the capability of merging data and word processing files.

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### Standard features for easy comparison of personal computers

**Components**
- Keyboard
- CRT
- Disk storage device
- Printer

**Storage media**
- Flexible diskette: 15-40 pages
- Mini-diskette: 75-100+ pages

**Storage capacity**
- Flexible diskette: 15-40 pages
- Mini-diskette: 75-100+ pages

**Word processing system capabilities and functions**
- Automatic underlining
- Vertical scrolling
- Word wraparound
- Automatic page numbering
- Repagination

**Additional software available on most personal computers in this price range:**
- Accounting software (payroll, accounts receivable, disbursements)
- Spelling verifier

**Price range:** $2,000 to $6,000

---

### Standard features for easy comparison of dedicated word processors

**Components**
- Integrated keyboard/printer
- Optional single or partial-key display
- Optional storage media unit

**Storage media**
- Flexible diskette: standard
- Mini-diskette
- Internal memory
- Magnetic card

**Storage capacity**
- Standard diskette: 75-100+ pages
- Mini-diskette: 15-40 pages
- Magnetic card: 5,000 characters

**System capabilities & functions**
- Automatic centering
- Automatic underlining
- Backspace error correcting
- Document editing
- Delete
- Document assembly/merge
- Insert
- Word wraparound

**Optional equipment and software**
- Automatic sheet feeder
- File sort

**Price range:** $700-$10,000

---

### Comparison of dedicated and integrated systems

**Word processing/system capabilities and functions (see Glossary for definitions)**
- Automatic centering
- Automatic underlining
- Backspace error correcting
- Document editing
- Delete
- Document assembly/merge
- Insert
- Word wraparound

**Automatic sheet feeder**
- Forms input
- Global search and replace
- Headsets/footers
- Highlighting
- Spelling verifier
- Word wrapping

**Price range:** $3,000

---

### Electronic typewriter with text-editing capability

**Components**
- Keyboard
- CRT
- Disk storage device
- Printer

**Storage media**
- Flexible diskette: 15-40 pages
- Mini-diskette

**Storage capacity**
- Standard diskette: 75-100+ pages
- Mini-diskette: 15-40 pages

**System capabilities and functions (see Glossary for definitions)**
- Automatic underlining
- Vertical scrolling
- Word wraparound

**Optional equipment and software**
- Automatic sheet feeder

**Price range:** $5,000-$26,000
### Standard features for easy comparison of dedicated word processors (continued)

<table>
<thead>
<tr>
<th>Components</th>
<th>SHARED-LOGIC SYSTEM</th>
<th>Storage media</th>
<th>Storage capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Central processing unit</td>
<td>Winchester or other removable/ nonremovable rigid disk</td>
<td>Rigid disk: 250-700,000+ pages</td>
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<tr>
<td>Terminals with video display</td>
<td>Flexible (floppy) diskette</td>
<td>Standard diskette: 75-100+ pages</td>
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<tr>
<td>Printer</td>
<td>Disk storage device</td>
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<table>
<thead>
<tr>
<th>System capabilities and functions (see Glossary for definitions)</th>
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<td><strong>Standard functions</strong></td>
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<td>Automatic centering</td>
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<td>Automatic underlining</td>
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<tr>
<td>Bidekspace correction</td>
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<tr>
<td>Bidirectional printing</td>
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<td>Block-move/scopy</td>
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<td>Column move/delete</td>
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<td>Document assembly/merge</td>
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<td>Global search and replace</td>
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<td>Headers/footers</td>
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<td>Horizontal scrolling</td>
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<td>Replication</td>
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<th>Optional equipment and software</th>
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<td><strong>Main software</strong></td>
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<td>Automatic sheet feeder</td>
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<td>Communications</td>
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<td>Compilers</td>
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<td>Printers</td>
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<td>Forms tractor</td>
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<td>Ink jet and laser printers</td>
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<td>Line and matrix printers</td>
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<td>Magnetic card reader</td>
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**Price range**: $14,000-$65,000

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**PART II**

Developing and implementing a word processing system in the court: the systems approach
SECTION 1
Identification of problems and alternate solutions

Court managers or equipment salesmen all too frequently suggest a technological remedy to workflow problems and recommend a word processor or computer system before identifying the specific problems that are to be resolved by this technology. Today most court managers are familiar with the value of adopting a "systems approach" to evaluating court needs before making substantial technological or procedural changes in court operations. The systems approach emphasizes the need to identify and study the problems and define the goals and objectives before a solution is chosen.

Through the systems approach, judges, court managers, and analysts assess court needs and select the most appropriate manual or technological alternatives. Each of the following steps in this approach is important in achieving good results and attaining goals. Many courts have failed to solve their problems or committed serious errors by omitting or condensing too many of the following steps:

- Identification of problems and alternate solutions
- Feasibility study
- Cost-benefit analysis
- Procurement process
- Implementation and training
- Ongoing monitoring, evaluation, and refinement

The rest of this monograph explains the nuances of how the systems approach can assist in assessment of requirements and implementation of word processing systems in the courts. Although most such systems are not as complex and costly as larger data processing information systems, the assessment of court requirements and the evaluation of systems under consideration are critical to their successful operation.

What word processors can and cannot do

Word processors will not, by themselves, resolve certain personnel and procedural problems. Word processors cannot meaningfully improve basic typing and secretarial skills, nor change the style, format, typing standards, or practices of court personnel. They cannot reduce demand for typing services—in fact, the introduction of word processors will substantially increase this demand—or reduce unnecessary paperwork, unreasonable demands, and inefficient clerical and correspondence practices; or reconcile inequitable distribution of workload or establish better work schedules.

In addition, there are several erroneous and misleading claims and benefits made about word processing equipment. It is said, for example, that typographical error rates will markedly decrease for all typing work. Instead, error rates for original typed documents will be about the same regardless of the type of equipment used; however, errors will be eliminated easily with proper text editing in the revision process.

Word processing technology will not substantially increase the productivity for original typed materials. In fact, productivity rates for original typed documents are about the same on standard typewriters or sophisticated word processors; typing productivity may substantially increase, however, for repetitive or revised materials.

Another misconception is that the greater the amount of revisions required for a document, the more advantageous the use of word processing equipment will be. Actually, word processing is practical and effective when minimum or moderate amounts of text or format revisions are required; when more than sixty percent of the text must be revised, it is just as productive to retype the entire document.

Another erroneous claim is that word processors are easy to learn and operate after a few days of training and minimal experience. In fact, the achievement of proficiency on most word processors usually takes several weeks.

Before word processing equipment is purchased or upgraded, the court should determine whether maintaining the status quo or making improvements in the current manual operations can adequately resolve its problems. The following alternatives should be examined:

- Redistributing typing and case workload, reassigning personnel, and redefining job duties
- Revising and consolidating forms and noticing procedures
- Preparing and regularly using more effective techniques and materials, such as preprinted forms, pressure-sensitive labels, multipart forms, and window envelopes
- Eliminating unnecessary or duplicative typing work
- Establishing, monitoring, and enforcing typing production standards
- Educating referees in better dictation and writing practices, and increasing training of clerical and secretarial personnel in basic administrative and typing skills
- Sharing word processing resources where necessary, e.g., when volumes and type of workload does not justify separate word processors for
individuals or departments but when the technologyl becomes cost-effective if groups share the system

When does the court need word processor?
The typical problems that might cause a court to examine the potential value of word processing technology include the following:

• substantial backlog in typing and printing of documents
• unacceptable turnaround time for the revision of documents
• poor quality of typed documents
• excessive amounts of retyping because of typo-
• graphical and format errors or minor editorial changes
• excessive typing production schedules
• need for excessive clerical or secretarial support, or
• also need and secretarial overtime
• increased typing and workload demands to be
• met in spite of budget or personnel restrictions
• extensive amounts of retyping the same or similar information for various notices, listings, or reports
• difficulty in accessing and extracting case information
• maintenance of large permanent documents, such as procedural manuals, that require periodic
• minor updating or reorganizing

The three most crucial questions in making the decision to obtain word processing technology are (a) whether the additional resources will sufficiently
• produce extra typing productivity to justify the extra equipment expenditure; (b) whether the typing and clerical staff can be trained to feel comfortable with the word processors and believe the equipment will
• substantially assist them; and (c) whether the system will actually produce, or provide access to, the necessary information and printouts within the desired
• time without too much effort.

In addition, the court should not acquire expensive word processing equipment unless various prerequisites or anticipated goals can be met. The court should be able to answer in the affirmative most of the following questions.

Can the court reasonably estimate the typing
• volume to be produced?
• Is there sufficient volume to keep personnel
• productive?
• Does the court expect to limit or reduce the number of court personnel assigned to clerical or secretarial positions?
• Does the court plan to reorganize and redistribute the typing workload?
• Can the court directly project increased judicial or clerical productivity by introducing word processing?
• Can the court project good utilization of the equipment?

Are most of the documents appropriate for efficient
• production on the word processing system, i.e., is there a large proportion of repetitive or revision
• typing?
• Can the court cost-justify the acquisition of word
• processors within two to three years?
• Does the court need or require, documents of better
• quality produced more rapidly?
• Does the court have time limits for the production of typed documents that are not met consistently?
• Is the court sure that the word processing system
• will provide faster access and more accurate and
timely information?

In addition the court should not acquire expensive
• word processing equipment unless groups share
• word processing technology unless the system
• becomes cost-effective if groups share
• it. However, if the court finds that its word processor has a slow
• response time for certain text-editing or records
• processing functions, or requires frequent changes or
• modifications in the word processor, the court has used the word processor, or find the machines too
• complex, burdensome, sophisticated, or unreliable to
• accomplish standard tasks; (c) court personnel do not have sufficient and appropriate typing and clerical
• work to utilize them fully.

On the other hand, a word processor being
• considered for court use must have the capacity to
• support all planned court tasks for which it is needed. If the court finds that its word processor has a slow
• response time for certain text-editing or records
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prepared, and what other types might be prepared on word processing equipment.

In what form (handwritten or typed) is the original material that will be entered or revised on word processing equipment?

What additional administrative tasks and duties (such as filing, answering telephones, researching dockets) are performed by personnel who might become word processor operators, and how and by whom such tasks be performed after the installation of word processing equipment?

What are the volume and typographical characteristics of each type of document produced—i.e., what is the volume and the relative proportion of the total typing workload for each type of document? What are existing and anticipated turnaround times, the typical length of each type of document, the proportion of the text needing revision for each type of document, the response time required for reply to inquiries or production of reports for case records?

What are the existing typing production (total volume) and the productivity (pages or lines per day) rates or standards for each type of document, and what are the existing and anticipated work schedules?

What are the anticipated quality standards desired by court management?

To what extent will the court administration be willing to change work schedules, typing priorities, and time demands, or restructure the office or department in terms both of office space and of personnel duties and responsibilities?

### Data collection instruments

One desirable approach is to collect and analyze the existing and projected documents that might be produced on the word processing system. The court should determine the volume and frequency with which each type of document is produced, who receives the documents, and how they are transmitted. The court must gather the information necessary to prepare a flowchart, matrix, listing, and narrative to help describe the functions performed by the court, the procedures used to produce documents, and the sources and entry points of the material that will be entered in the word processing system.

Either one-time or recurring fixed costs can be substantial expenditures and should be accurately calculated. They vary depending on actual and expected usage. Variable costs are frequently overlooked but can be substantial expenditures and should be included in any cost evaluation. The following variable cost items should be calculated:

- word processing supplies: ribbons, print wheels, ink cartridges
- personnel—court staff assigned full-time to word processing operations (full-time staff)
- staff training (recurring)
- rental of additional equipment or equipment modifications
- word processing (recurring)
- acquisition of additional software or equipment
- maintenance fee (recurring)
- space and related services—light, electricity, etc.
- office furniture and accessories (recurring)
- site preparation and equipment installation charges—electricity outlets, shipping (one-time)

### Cost and benefit categories

There are four basic categories to analyze when completing a cost-benefit analysis for word processing equipment: personnel costs, tangible benefits, and intangible benefits.

**Fixed costs**

Either one-time or recurring fixed costs remain relatively constant throughout the useful life of the system or the period the analysis covers. These expenses are relatively static regardless of work demands or production variations. The following is a list of the fixed cost items that should be calculated:

- word processors(s) including peripherals and accessories (if purchased, one-time costs; if leased or rented, recurring costs)
- word processor(s) maintenance fee (recurring)
- space and related services—light, electricity, etc.
- office furniture and accessories (one-time)
- site preparations and equipment installation charges—electricity outlets, shipping (one-time)

### Experience with the use of word processors has shown that with the proper selection of equipment, word processing technology can provide significant benefits to courts by increasing productivity and administrative effectiveness. The extent to which these benefits offset the increased costs, however, particularly for equipment and supplies, has seldom been ascertained.

The court must weigh the importance of improving efficiency and alleviating existing problems against the estimated costs and the necessary new administrative procedures. The more critical the problem, the greater the potential improvements, the more desirable a solution, even at a higher cost. Each court must balance the value and benefits of making a change against the costs and organizational adjustments required. This process is called cost-benefit analysis.

The objective of a cost-benefit analysis is to identify from among various manual and technological alternatives those approaches that offer the best combination of benefits or potential savings at the least cost over a prescribed period of time. The purpose is to quantify benefits and relate them to the costs in a meaningful way. In addition, the court must be aware that not only the costs but the importance of the benefits may change over time. Costs can be identified and evaluated with relative ease, normally expressed in dollars. The most rational method is to compare potential benefits with costs on some mathematical basis, e.g., in the form of ratios (benefits to costs) or a subtraction formula (benefits minus costs equals net value gain or loss). As previously discussed, some intangible benefits are difficult to quantify and relate to financial expenditures. However, some comparisons can include intangible benefits if the court is willing to develop a weighting scheme and rate the importance and potential impact of these benefits. This approach is based on the theory that any benefit can be ranked according to its relative importance to a decision-maker.

Only when current costs and efficiency are weighed against the corresponding costs and effectiveness of the word processing system will the court manager have a rational basis for deciding whether to obtain the equipment, and if so, which equipment choices are most cost-effective. Minimally, the court should compare total costs of the existing approach (whether manual or an existing word processing system) to costs and benefits of the proposed word processing alternatives.

1. From Experience with the Use of Word Processors, A.B.A. Staff Study (1976).

2. Ibid. See also: Court Reporting Alternatives for Courtroom (Williamsburg, Va: National Center for State Courts, 1975).
Cost evaluation methodology

Traditional text editing and forms generation

Costs must be evaluated over the projected lifespan—not just the initial up-front and implementation expenditures—for the word processing application, and compared with the existing operations or alternative approaches under consideration over the equivalent time period. Therefore, all direct and indirect, onetime and recurring, fixed and variable cost estimates should be included in a composite cost assessment of each of the alternatives under consideration.

One of the major cost elements, yet one of the most elusives to calculate precisely, is personnel costs. The unit-of-cost items (e.g., salaries and clerks) for which costs will be computed ("person" hours connected to salaries and hours of word processing production) should be established at the outset. These costs are computed by finding the product of the dollar rate per unit-of-cost item and the number of cost items.

In developing a separate set of costs for each alternative, costs for the current, usually manual, operation are calculated first. Then costs for the other alternatives can be developed using the current system costs and production as a standard.

The relationship between productivity and cost represents the cost-productivity of a word processing system. Since word processor productivity varies substantially, depending on the application and equipment employed, no single cost-productivity ratio can be derived.

Either a cost per page or a cost per document may be used as a primary measure of cost-effectiveness.

Tangible benefits

Direct reductions in costs, particularly manpower reductions, where savings can be projected with some degree of certainty because of the introduction of word processing technology, are tangible benefits. Savings can be translated into specific quantifiable values or weighted and only fished into a general cost-benefit equation. The following are examples of tangible benefits:

• reduction or limiting of future growth of secretarial and clerical staff
• reduction or elimination of paperwork or overlapping documentation and cross-referencing (e.g., multiple notices, reports, docket books, indices)
• reduction in case processing time and document preparation time by judges, law clerks, and higher-echelon administrative staff
• reduction in access time and manpower because more precise, accessible, and accurate information is available
• anticipated increase in workload which can be handled by judicial personnel

Intangible benefits

These are difficult to quantify and to assign specific monetary values. Frequently these types of benefits may be just as valuable as financial benefits, but they should not substitute for some cost component of the alternatives being evaluated. Sometimes a quantitative scoring schedule can be established and compared to the tangible intangible benefits. Examples of intangible benefits are the following:

• improvements in the quality of court administration and the quality of typed documents generated by the court
• reduction in case processing time and document preparation time and thereby improving the efficiency and morale of court personnel
• enhanced responsiveness and image of the court to the public as being more efficient, accurate, and responsive to public needs
• assistance and savings to other government agencies (district attorney, public defenders, law enforcement, legislatures)

These figures should be calculated for each word processing application (opinions, notices, records processing) using an anticipated volume of documents to be produced by the court. Analyzing and cost justifying each major application will help the court both to understand which applications will be most cost-effective and to establish priorities in the implementation of word processing applications.

If a court intends to use word processing only for traditional word processing activities—the sum of the number of persons multiplied by the average salary and benefits multiplied by the annual fee—this is the only crucial benefit is in the speed and volume of production of the documents; quality is equivalent to that of an electric typewriter, and other tangible or intangible benefits are of minimal importance. For each manual and word processing alternative under consideration, the court should make the following calculations:

STEP 1: Calculate the total estimated number of pages produced annually for each major category or application.

STEP 2: Calculate the time (proportion of an hour) required to produce a page of output for each major category or application (typing, proofing, printing, re-editing).

STEP 3: Calculate the total weighted printed output—the sum of the annual volume (Step 1) multiplied by the amount of time per unit of production (Step 2) of each major category or application.

STEP 4: Tabulate the annual nonpersonnel expenditures.

STEP 5: Calculate total expenditures (personnel plus nonpersonnel) divided by the total weighted printed output (Step 3). This provides a comparative value of pages of printout.

Worksheet for cost analysis and benefit analysis follow.
Word processing used for records processing in courts

Since records processing encompasses so many possible applications, methods of production, and measures of productivity, it is very difficult to quantify potential productivity gains accurately. Output may be measured in ways such as the number of printed pages or forms, the number of responses and inquiries, or the timeliness and accuracy of information. Some applications are comparable to providing the standard fill-in forms and letters discussed earlier in this section; other applications require the development and maintenance of a large database with extensive revisions but minimal production of printed listings and forms.

It is also difficult to provide general estimates of potential cost savings. The court should estimate and compare the costs for the existing operation with the alternative word processing system options under consideration and with more sophisticated records processing systems on minicomputers. Lists of the key fixed and variable cost items that need to be tabulated are provided earlier in this section (see "cost and benefit categories"). The court must be particularly careful to estimate all appropriate direct and indirect personnel costs associated with any records processing operations.

### Cost-Benefit Analysis

<table>
<thead>
<tr>
<th>Documents produced</th>
<th>Average number of pages</th>
<th>Frequency of production (annual)</th>
<th>Annual total pages of production</th>
<th>Time per page: manual production</th>
<th>Time per page: word processed</th>
<th>Potential increase in pages produced with word processing</th>
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<tr>
<td>Reports</td>
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<td>Opinions</td>
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<td>Lists</td>
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<td>Notices (list types)</td>
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<td>Statistical reports (list types)</td>
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<td>Other (specify)</td>
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<td><strong>Total</strong></td>
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<th>Major types of Inquiries</th>
<th>Annual number of Inquiries</th>
<th>Average response time</th>
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<tbody>
<tr>
<td></td>
<td>Manual</td>
<td>Word processing</td>
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<tr>
<th>Weight</th>
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<th>Rating</th>
<th>Word processing</th>
<th>Score (weight x rating)</th>
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<td>Tangible &amp; Intangible benefits</td>
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<td>Accuracy of information</td>
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<td>Timeliness of information</td>
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<td>Personnel time (judge)</td>
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<td>Personnel time (clerical and secretarial)</td>
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<td>Quality of court services</td>
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<td>Quality of documents</td>
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<td>Space requirements</td>
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<td>Budget requirements</td>
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<td>Flexibility of use of personnel caseloads</td>
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<td>Management of caseload</td>
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`Sum of Score`
SECTION 4  Procurement process

The usual method of obtaining word processing equipment should be through a request for a proposal (RFP) for acquiring only one or two inexpensive word processors for a few straightforward word processing applications, a detailed RFP and extensive evaluation process may be unnecessary. Too frequently, however, courts have acquired word processing systems by "sole source" procurement, without determining if there are available alternatives and capabilities, and have either obtained poorly performed or paid more than necessary for the resources provided.

The RFP process

While the RFP process may seem time-consuming and costly, this expenditure is minimal compared with the possible savings of installing an ineffective or dysfunctional word processing system.

Criteria governing an RFP are:
• that vendors may propose better solutions than those envisioned by the court;
• that on-line and type II word processors are so diverse and so rapidly changing that it is impossible for the court to keep current;
• that RFPs solicit more than just equipment; e.g., software support, training programs, and maintenance services;
• that comprehensive evaluation of the more attractive offers permit the court to compare and identify objectively the more effective and cost-beneficial word processing systems;
• that better or more flexible terms and extra services may be available in a competitive solicitation;
• that trade-offs can be obtained and better evaluation criteria obtained, even though no single machine has all features and functions that may be sought;
• that the selection team (and the court) can focus on those elements that are crucial to a well-informed, unbiased decision and will perform the vendors of the importance of the various functional capabilities and production capacities required so that they can offer the most appropriate system. This list will also serve as a basis for objective evaluation of the vendors' proposals and demonstration of the equipment. Classification criteria according to importance

After the criteria are specified, a weighting scheme should be agreed upon by the review committee. (This committee should be well understood by the court and by the individuals involved in preparing the RFP. This will provide a worksheet of the types on page 31. After all the criteria are specified, the committee should further review the results and reach a group consensus on the most appropriate choice.)

Classifying criteria according to importance

After the criteria are specified, a weighting scheme should be agreed upon by the review committee. Each mandatory and desirable criteria must be considered. Mandatory requirements represent the absolute or minimum requirements that the vendor's proposal must meet in order to be considered. Following are some requirements that should be considered:
• hardware: number of CRT work stations, type of printer, storage medium and capacity
• software: word processing text input and editing features, OCR conversion features, file transfer and interoffice communication software, use of microcomputer peripheral equipment or capabilities
• demonstration of a vendor's product must be evaluated on a relative scale. The court should develop its own criteria and sub-criteria and sub-sub-criteria, e.g., how much weight should be given to each factor, using a scale such as the following:

<table>
<thead>
<tr>
<th>Degree of Importance</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very important</td>
<td>5</td>
</tr>
<tr>
<td>Moderately important</td>
<td>3</td>
</tr>
<tr>
<td>Not very important</td>
<td>2</td>
</tr>
<tr>
<td>Minimally important</td>
<td>1</td>
</tr>
</tbody>
</table>

Obviously, the criteria and their assigned weights create objective judgments. The evaluators should agree on the terminology and the weights before the formal evaluation of the vendor proposals begins. The vendors should not be informed of the details of the criteria to be evaluated or of the weighting. The RFP should generally list the classes of criteria under consideration, but not other evaluation criteria. Examples of the application of this rating procedure are shown below.

Criteriadescription | Weight | Interpretation |
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Automaticfootnoting</td>
<td>7</td>
<td>Very important</td>
</tr>
<tr>
<td>Appearance</td>
<td>2</td>
<td>Minimally important</td>
</tr>
<tr>
<td>Average response time</td>
<td>9</td>
<td>Extremely important in records file</td>
</tr>
</tbody>
</table>

Evaluating the vendor's proposals and demonstration

Each court will develop its own criteria and weighting scheme based upon its unique demands and priorities. The mandatory requirements are judged first.

Failure to meet these absolute specifications should eliminate the vendor's proposal. A vendor should be given an opportunity to clarify his statement if interpretation is in question, but the decision is usually final.

Obviously, all mandatory features and capabilities are essential and well understood by the court and by the individuals involved in preparing the RFP. This will prevent most of the confusion and will avoid misunderstandings and conflict.

The specifications and definitions for desirable criteria can be less precise. Each element is judged according to the degree of desirability or conformity that is shown in the vendor's written or demonstrated response. Points are awarded according to preestablished guidelines and a consensus of the evaluation committee.

Benchmark testing of proposed system

The court should never rely solely on sales literature, salesmen's explanations and representations, or the submitted vendor responses as the basis for selecting a word processing system. Any manufacturer seriously interested in responding to the request for proposal must be prepared to demonstrate the word processor's capabilities to the court's evaluation committee.

This demonstration of a vendor's product must not be just the standard or "canned" presentation of the system; rarely does a vendor's demonstrated demonstration fail, or show the weaknesses and possible defects of the equipment and software programs. When evaluating word processing systems, the court should include an extensive "benchmark" performance test that has been specified and developed by the evaluation committee. Actual documents from the court, to be handled by the word processor, should be in this benchmark's capabilities on comparable performance standards and to understand the software requirements and alternative procedures offered by each manufacturer. This type of test demonstrates the strengths and weaknesses of the word processing systems offered.

The ratings for each vendor conducting the benchmark test should be assigned according to some rating scale such as the following:

<table>
<thead>
<tr>
<th>Rating</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Excellent</td>
<td>8-10</td>
</tr>
<tr>
<td>Good</td>
<td>5-7</td>
</tr>
<tr>
<td>Fair or poor</td>
<td>1-4</td>
</tr>
</tbody>
</table>

Each committee member should rate each proposal independently on standard evaluation forms after reviewing the proposal and the mandatory demonstration. Each evaluator, expressing his or her independent judgment and area of knowledge, should prepare a worksheet of the type on page 31. This process, of course, requires that the manufacturers are evaluated, the court should tabulate and compare the relative ratings for each word processing system. The court should include an extensive "benchmark" performance test that has been developed and evaluated by the evaluation committee, a consensus of the evaluation committee should further review the results and reach a group consensus on the most appropriate choice.
meets in serving judicial needs. In the final analysis, the court should acquire a word processing system that can be adequately serviced within a few hours, has a good or excellent reliability record, requires few repair calls, is responsive, and has competent maintenance personnel; that has been demonstrated to meet or exceed all the performance requirements established by the court; that the entire evaluation committee or a great majority of it feel comfortable with and are confident will meet both the operators' and management's demands; i.e., that the equipment will produce the desired outputs and results within a reasonable or prescribed time frame; that will not be too cumbersome to learn and that will facilitate expeditious production of documents and be easy to operate; that is within the budget allocation and can be shown to be reasonably cost-effective and cost-beneficial for the principal applications considered.

Selecting the vendor

Before a contract is signed, final clarification of terms and conditions should be made. All assurances of machine performance, delivery dates, maintenance, and other terms should be put into writing. Furthermore, it should be specified that the vendor's proposal constitutes part of the contract, because the decision was based on the vendor's proposal.

Contract content

Many court users will ask a very basic question: Should we sign the vendor's standard contract? The answer is, No—not until it has been modified to meet the terms and conditions required by the court. Standard vendor contracts generally serve the courts to detail are shown on the terms and conditions required by the court. The court should conduct final negotiations with the possible advantages and trade-offs among the acquisition methods are usually not germane to the court.

It will generally be advantageous to purchase word processors when (a) only a few low-priced word processors (under $6,000.00-$7,000.00) systems are to be acquired; (b) a court has extensive experience with word processors and is assured that they can adequately meet all existing and projected word processing needs without additional equipment or software enhancements; (c) the court plans to rent or lease the equipment for more than three years. It will be advantageous to rent or lease with an option to purchase when (a) the court has no experience with word processing equipment; (b) the court needs additional word processing capacity for a short period; (c) the court cannot sufficiently evaluate the equipment will (d) the court cannot sufficiently evaluate whether the word processor has adequate capacity and performance capabilities (this is particularly important for records processing functions that sometime cannot be fully analyzed and demonstrated during the RFP and benchmark assessment); (d) funding sources are limited; (e) a substantial number of word processors or a large shared-resource word processing system is obtained; or (f) the manufacturer cannot provide all the desired hardware and software capabilities.

The court must be particularly cautious when a manufacturer wants to sell equipment at substantially reduced prices. This is sometimes an indication that the particular equipment or model is outdated or that new, more competitively priced and more efficient equipment will soon be introduced. A comprehensive survey of the market and current prices should be completed.

Once a court makes a substantial purchase of word processing equipment, this initial acquisition often necessitates additional acquisitions from the same manufacturer to avoid conversion costs, staff retraining, and machine incompatibility. Therefore, the court should thoroughly explore and assess the word processing market before any substantial purchase is made.

<table>
<thead>
<tr>
<th>Procurement Process</th>
<th>EXAMPLE OF EVALUATION WORKSHEET</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vendor: ___________</td>
<td></td>
</tr>
<tr>
<td>Date: ____________</td>
<td>Score: ____________</td>
</tr>
<tr>
<td>Minimum: __________</td>
<td>Vendor score: __________</td>
</tr>
</tbody>
</table>

**MANDATORY CRITERIA**

<table>
<thead>
<tr>
<th>Items</th>
<th>Yes</th>
<th>No</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Printer speed</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of lines displayed</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Document-oriented files</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Footnote block</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of fields available in data file</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**DELIBERABLE CRITERIA**

<table>
<thead>
<tr>
<th>Items</th>
<th>Weight</th>
<th>Score</th>
<th>Weight</th>
<th>Score</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Applications (benchmark)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Memory</td>
<td></td>
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<tr>
<td>Standard forms and letters (field assembly)</td>
<td></td>
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<tr>
<td>Forms-Hi</td>
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<td></td>
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</tr>
<tr>
<td>Memory/character correspondence</td>
<td></td>
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</tr>
<tr>
<td>Equipment/material</td>
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<td></td>
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<tr>
<td>Color (bid proposal)</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>a. Hardware</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>b. Inventory</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Summary</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Date of operation</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Test (data) entry</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Testing</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>List processing updates</td>
<td></td>
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</tr>
<tr>
<td>Printing</td>
<td></td>
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</tr>
<tr>
<td>Media handling</td>
<td></td>
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</tr>
<tr>
<td>Support services</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Service, training, and support</td>
<td></td>
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</tr>
<tr>
<td>Delivery rates</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Availability of service personnel</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Travel expenses</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Training manuals</td>
<td></td>
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<tr>
<td>Training programs</td>
<td></td>
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</tr>
<tr>
<td>Equipment duplication and user ratings</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Strength and reputation of vendor</td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

**Function/feature/capability**

<table>
<thead>
<tr>
<th>Weight</th>
<th>Score</th>
<th>Weight</th>
<th>Score</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Display quality</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Print quality</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Special print quality</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Screen size</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Security features</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Display features</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Printer features</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Machine/driver</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Input features</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Automatic editing features</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Document assembly features</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Search, delete, move capabilities</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Arithmetic capabilities</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Records processing capabilities</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Records formatting capabilities</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Only those applications, features, and processes pertinent to the court's objectives and needs should be included in the evaluation. The items and descriptions listed are for illustrative purposes.*
**EXAMPLE OF EVALUATION WORKSHEET**

Overall best features and capabilities:

Overall weakest features and capabilities:

---

**SAMPLE CONTRACT TERMS**

<table>
<thead>
<tr>
<th>Section</th>
<th>Purpose</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Term of contract and contract termination To prevent the contract duration and conditions of early termination.</td>
</tr>
<tr>
<td>2.</td>
<td>Installation and delivery date In addition to general statements about defining delivery date, flaws detailing the program schedule should be prepared.</td>
</tr>
<tr>
<td>3.</td>
<td>Liquidated damages To present damage assessments for delayed installations or site performance. A contract without such remedies for vendor failure is an invitation to abuse. Terms should be carefully detailed.</td>
</tr>
<tr>
<td>4.</td>
<td>Standard of performance and acceptance of equipment To prevent the procedures and conditions under which equipment will be accepted before payments will accrue. Performance levels should be carefully detailed. Equipment that does not meet acceptable performance levels over an acceptable period should be replaced by the vendor.</td>
</tr>
<tr>
<td>5.</td>
<td>Terms of use To detail how various levels of use are defined and charges assessed (e.g., extra use charges), and remedial maintenance, principal period of maintenance, replacement parts. Also to detail the maintenance requirements and removal actions.</td>
</tr>
<tr>
<td>6.</td>
<td>Maintenance of equipment To define and assess different maintenance categories (e.g., on-call and site maintenance, preventive and remedial maintenance, principal period of maintenance, replacement parts).</td>
</tr>
<tr>
<td>7.</td>
<td>Substitutions, additions, and conversion To provide the basic terms under which equipment may be substituted or added to the system. It is important to provide for substitution. If a rental, a major problem has been vendors' refusal to permit users to update their systems (e.g., to replace an outdated, expensive unit with modern, less expensive units).</td>
</tr>
<tr>
<td>8.</td>
<td>Major field modifications To detail the terms during any field modifications by the vendor.</td>
</tr>
<tr>
<td>9.</td>
<td>Alterations and attachments To detail the conditions under which users may alter equipment. These agreements protect the vendor's interests.</td>
</tr>
<tr>
<td>10.</td>
<td>Program testing and compiling time To describe the terms of vendor testing and program compiling.</td>
</tr>
<tr>
<td>11.</td>
<td>Training and technical services To detail the terms of training and technical services (e.g., training courses, technical skills, costs) provided by or available through the vendor.</td>
</tr>
<tr>
<td>12.</td>
<td>Site preparation To detail site preparation terms. Usually the vendor provides specifications (after the user's request), and the user must bear the cost of meeting them.</td>
</tr>
<tr>
<td>13.</td>
<td>Transportation, installation, relocation, and return of equipment To detail the terms and conditions of equipment delivery, installation, relocation (if any), and removal.</td>
</tr>
<tr>
<td>14.</td>
<td>Risk of loss or damage, and conducer flexibility Usually to relieve the user of (and assign to the vendor) liability for most damages not due to user negligence or equipment modifications.</td>
</tr>
<tr>
<td>15.</td>
<td>Supplies To detail ownership or transfer of title.</td>
</tr>
<tr>
<td>16.</td>
<td>Supplies To detail ownership or transfer of title.</td>
</tr>
<tr>
<td>17.</td>
<td>Purchase option To detail any provisions for applying rental credits toward a purchase price. Usually part of proposal.</td>
</tr>
<tr>
<td>18.</td>
<td>Incorporation of proposal The vendor's proposal (response to RFP) should be made part of the contract.</td>
</tr>
<tr>
<td>19.</td>
<td>Warranty To detail any warranty. Obtaining a warranty is recommended.</td>
</tr>
<tr>
<td>20.</td>
<td>Taxes To detail any payments, if any.</td>
</tr>
<tr>
<td>21.</td>
<td>User's obligations, approvals To explain user's funding procedures. A few courts will be constrained by being unable to commit money over extended periods of time (e.g., unable to make long-term legal commitments).</td>
</tr>
</tbody>
</table>

SECTION 5
Implementation and training

Most word processing systems do not require any major remodeling of existing court facilities or reor-

sectioning of offices. Nevertheless, the court should
carefully review and prepare plans for the installa-
tion and placement of all components of the word
processing system.

Site preparation

There are two major environmental considerations
in the preparation of court facilities: (a) appropriate
office conditions that meet the technical specifi-
cations for the proper installation and operation of
the word processing equipment; and (b) desirable
office conditions that provide adequate comfort and
safety for personnel using the word processing
system.

Unlike many large computer systems, word proc-
essing systems do not normally require extensive
and expensive office and building modifications
such as additional air conditioning, raised floors,
fire protection, expanded power supplies, and a sup-
ply room. The court must be careful to review vendor
specifications, however, and be sure that the word
processing area where the system will be located
remains within reasonable temperatures and humid-
ity ranges. High temperatures will adversely affect
both court personnel and the reliability of the equip-
ment. Low humidity, a particular problem in colder
winter climates, can cause static electricity that may
harm the equipment and cause the loss of informa-
tion in the word processor. Appropriate placement
of the equipment or the installation of small air
conditioners and static mats will help alleviate such
problems. Some word processors may require ded-
cated power lines, special outlets, or high amperage.
Electrical fluctuations can seriously damage the
equipment. Word processing equipment should not
share an electrical line with other equipment requir-
ing heavy electrical power, such as air conditioners,
climate control equipment, or office machines.

The placement of the equipment is also particularly
important for the operator's comfort, efficiency, and
productivity. Lighting should provide a sufficient
level of illumination and brightness without produc-
ing undue glare on the CRT screens. The keyboard
and the CRT should be placed at the proper height
and angle.

Another important consideration is ease of access
to the work stations, storage units, and the printers,
particularly when court personnel share the work
stations or are not permanently located at a word
processing station. The amount and placement of the
wiring and outlets will be important. The location
and proximity of the work station to the printer(s)
must be considered because of the noise level of
the printer, particularly if the printer is used heavily
(right-handed only; otherwise located at a different
place). Unless there is a substantial distance between
the work personnel (which is not usually desirable),
or is only moderately used, an acoustic hood is usu-
ally required.

Conversion

Unlike data processing, the implementation of
word processing normally requires only a few
months. The court should appoint a qualified per-
son to serve as project manager for the installation of
the equipment, the training of personnel, and the con-
version to word processing applications. Normally,
an independent consultant or in-house study and the
systems selection should be assigned as the project
manager or supervisor.

A smooth conversion of the existing procedures
to word processing is not only desirable from a cost
standpoint but is also the first direct encounter most
users will have with word processing. Prompt results
with minimal errors will assure continuing enthusi-
asm and support for the word processing system.

There are three possible conversion approaches.

Direct conversion

The installation and implementation of the word
processing system and discontinuation of the old
manual approach take place simultaneously. This
approach is recommended only if the intended appli-
cations are not currently being performed. The advan-
tage of direct conversion is the relatively low cost of
implementation. The primary disadvantages are
that a working system is abandoned before personnel
are properly trained and that the equipment and
functions are still unproven. Rarely should this
approach be taken.

Parallel conversion

The old method operates simultaneously with the
word processing system for a specified period of time.
With parallel conversion, the new operating pro-
cedures and their resulting outputs can be compared
with the old. Personnel can learn the system and can
identify technical faults and procedural problems
while still having a backup or avoiding severely
reduced services. The primary advantage is the protec-
tion it affords against failure of the new system. The
advantages include additional costs of operating the
two systems simultaneously. Most word processing
applications should be implemented in the parallel mode, with dual operations lasting for not more than three or four months after the installation of the equipment.

Modular conversion

This refers to the implementation of self-contained applications or subunits of the applications, such as indexing or notice preparation. This approach is particularly desirable if a major records processing system is being developed on a large shared-resource word processing system. The implementation of the modules may involve either direct or parallel conversion. One advantage of the modular approach is that it permits extensive testing before introduction of the next major function. The disadvantage is that the conversion period can be lengthy and costly. Whichever conversion procedure is followed, the court must undertake a detailed evaluation of the installation of the system, to determine the level of accuracy, timeliness, and usefulness of the information to the users; the actual development costs; the differences between the projected and the actual schedule; adherence of personnel to established manuals and procedures; and adequacy of the documentation.

Training

During the initial four to ten weeks after the installation of the word processing equipment, the court must closely examine the causes. Examples of potential causes for low productivity may be one or more of the following: improper or poor vendor training, unreliable equipment, inadequate management of the word processing area, inadequate procedures, unsatisfactory word processing functions. Under such circumstances, the original contract or agreement should require the vendor to provide additional or supplemental training at no or minimal cost. Another approach is for the court to specify in the contract the withholding of full payment until adequate training and performance standards have been achieved.

The court must closely examine the causes. Examples of potential causes for low productivity may be one or more of the following: improper or poor vendor training, unreliable equipment, inadequate management of the word processing area, inadequate procedures, unsatisfactory word processing functions. Under such circumstances, the original contract or agreement should require the vendor to provide additional or supplemental training at no or minimal cost. Another approach is for the court to specify in the contract the withholding of full payment until adequate training and performance standards have been achieved.

Evaluation of the system

Several types and methods of audit should be conducted at least once a year.

Procedural audits

This type of review involves verifying that input, processing, and output procedures are met and that system controls are operating as designed. The procedural evaluation also pertains to where, when, and when various word processing functions are being performed.

System assessment

This is concerned with the technical aspects of word processing and to which the system is meeting the standards established for it. Normally, this evaluation is conducted by knowledgeable specialists. Performance should be assessed in relation to the plan or preestablished goals of the court, and any variances should be noted, investigated, and explained.

The areas that should be evaluated include:
- operating system performance, which includes the adequacy of the existing equipment, storage capacity, and functional capabilities of the software;
- equipment reliability and maintenance service;
- performance measurements, including the quality and timeliness of the documents produced and the accuracy of the information provided;
- backup and contingency plans;
- data and system security;
- adequacy of documentation;
- personnel competence and use of system's capabilities;
- environment (operators' comfort);
- workflow improvement.

Refining and upgrading the system

Because of the rapid advancements in word processing technology, changes are good that new equipment or enhancements to existing software packages will be available within a short time after the system is installed. Most software improvements are minor refinements or enhancements to the initial software provided. These enhancements should not require any significant retouching of personnel. The court should stipulate in the contract that the vendor will provide any software enhancements at no cost for at least one year after installing the system, and at a prescribed nominal cost after the first year of installation.

If existing equipment does not meet the anticipated goals and objectives within a reasonable time (six to nine months), the court must seriously study whether additional equipment enhancements will resolve the problems or whether equipment conversion to another manufacturer is necessary. The political and practical implications of a major equipment conversion are usually severe; therefore, the importance of a thorough analysis and comprehensive evaluation of vendors' capabilities and capacities before acquisition cannot be overemphasized.

At some point, particularly if the court is using outdated word processing equipment, or if substantial changes are made in requirements and services needed, court managers should consider the possibility of substituting or substantially upgrading their equipment. Some equipment changes, such as changing printers or storage devices (upgrading from 5½" to 8" floppy disks, or from floppy disks to Winchester disks) should be easy, and will offer better performance at competitive prices.

Before a decision is reached on any substantial hardware changes or expansion of the system, a cost
The use of word processing technology in the courts has not been as rapid as in the private business sector. Courts, for the most part, are just beginning to realize that word processing can be an effective tool in the myriad paper problems faced daily. As with any technology, the potential user of a word processing system should develop an understanding of the feasibility and applicability of a system in his own setting. The importance of the "systems approach" cannot be overstressed too much. Word processing technology has evolved from the magnetic card stage to the point where each word is housed within a single CRT. Today's systems are capable of "talking" with other systems for the price of a long-distance telephone call. Data processing and word processing are converging and becoming an integrated processing function.

Appellate courts within a large state can transfer opinions from one jurisdiction to another almost instantaneously. Material to be printed can be sent directly from a floppy disk to a photocomposition unit after communicating directly with LEXIS and WESTLAW, which provides automated legal research. Trial courts can produce forms and notice much faster, and may find that low-volume case tracking and record processing can be done with a word processor more easily than manually.

The growth of the word processing industry and the advancement of technology continues to reduce the cost of word processing systems. Within the next decade the word processing computer will be common a fixture in offices as the electric typewriter. Word processing is a technology that is already easy to use and practical, and courts should be taking advantage of the efficiencies it can offer in processing paperwork.

Summary

Acoustic Cover. A sound-deadening cover that houses a printer.

Background Processing. The ability to keyboard or edit text simultaneously while printing, telecommunicating, or performing other word processing functions.

Block Move/Copy. The function that permits blocks of text to be moved or copied when editing a document and document.

Boilerplate Text. Standard text that is stored and used repetitively in a document.

BYTE. A unit of computer storage approximately equal to one character.

Centering. The function that automatically centers text between margins.

Column Move/Delete. The capability of a word processor to isolate columns of information and restrict the editing functions to the isolated column.

Continuous Form. Sheets of paper connected by a perforated edge designed to be used with a pinfeed, platen or tractor-feed device.

Control Character. A symbol that designates a particular function, such as tab. This symbol appears on the screen but does not print.

CPU (characters per second). The number of characters an output device prints in one second.

CFL (central processing unit). The part of a computer that contains circuitry that controls the interpretation and execution of instructions.

CRT (cathode ray tube). A video display screen.

Cursor. A lighted position indicator on a screen that indicates the location of the operator's next input.

DAISYWHIRE. Interchangeable print element for a printer.

Daisywheel. An interchangeable element on a printer, offering letter quality printing, at a printing speed of 200 characters per second.

Database. A collection of interconnected data organized in a computer to reduce duplication of information, to provide rapid retrieval and recognition of the data, and to generate reports.

Decimal Alignment. The function that automatically aligns columns of figures on the decimal point.

Delete Settings. A format setting, with commonly used margin and tab settings, that is automatically implemented by the system when a format is not specified by the operator.

Delete Capability. The function that removes characters, words, lines, or paragraphs or pages from the storage medium.

Dictionary Spelling Verify. The function that matches words against a stored dictionary, in order to check for spelling or typographical errors.

Desk Drive. The device that operates the floppy or hard disk.

DeskTop Hyphen. A hyphen, inserted by the operator, that is printed only if the divided word appears at the end of the line.

Display Buffers. In CRT-based systems, a temporary storage area used for inputting data before it is transferred to diskette for permanent storage.

Display Functions. Text editing or computer functions that can be seen on a CRT screen.

Distributed Logic Word Processing System. A word processing system where each terminal has its own computer. Peripherals and storage devices are frequently shared by the terminals.

Document Assembly/Management. The ability to combine several documents into one document. Also refers to the integration of letters and address lists to print personalized letters.

Document Storage System. A word processing system that stores text on multi-page documents. Reproducing documents, moving or copy­ ing text from page to page is made easier and faster to accomplish than on page-oriented systems. See page-oriented system.

Double Density. The storage of information on a floppy diskette in a manner that doubles the capacity of a standard diskette.

Double-Sided (Offset). A type of diskette that uses both sides for the storage of information.

Dual Column. The ability of a word processing system to format text in two-sided by side columns.

Electronic Typewriter. A device of electric typewriter and electronic typewriter. Electronic typewriters can facilitate arrangement of text as it is typed and can store typed information, but have limited text-editing capabilities.

Error Correcting. The function that allows the operator to replace one character by striking over it with another.

Extra-Wide Line Width. Capability that allows the creation of wide documents, usually in excess of 200 characters in width.

File Length. The number of characters, lines, or pages in the document or data file being accessed.

File Select. The ability of the system to selectively retrieve information from data files, on specification by the operator.

File Sort. The ability of the system to arrange data in alphabetical or numerical order.

Footer. Information to be printed at the bottom of all or most pages of a document. This function is frequently used in conjunction with automatic page numbering.

Footnote. A reference to a note or a page containing a note. A footnote is added by the operator after typing the word "footnote".

Glossary of Word Processing Terms

Acoustic Cover. A sound-deadening cover that houses a printer.

Background Processing. The ability to keyboard or edit text simultaneously while printing, telecommunicating, or performing other word processing functions.

Block Move/Copy. The function that allows blocks of text to be moved or copied when editing a document and document.

Boilerplate Text. Standard text that is stored and used repetitively in a document.

BYTE. A unit of computer storage approximately equal to one character.

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Column Move/Delete. The capability of a word processor to isolate columns of information and restrict the editing functions to the isolated column.

Continuous Form. Sheets of paper connected by a perforated edge designed to be used with a pinfeed, platen or tractor-feed device.

Control Character. A symbol that designates a particular function, such as tab. This symbol appears on the screen but does not print.

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Delete Settings. A format setting, with commonly used margin and tab settings, that is automatically implemented by the system when a format is not specified by the operator.

Delete Capability. The function that removes characters, words, lines, or paragraphs or pages from the storage medium.

Dictionary Spelling Verify. The function that matches words against a stored dictionary, in order to check for spelling or typographical errors.

Desk Drive. The device that operates the floppy or hard disk.

DeskTop Hyphen. A hyphen, inserted by the operator, that is printed only if the divided word appears at the end of the line.
GLOSSARY. The capability that allows the storage of frequently used words, phrases, commands, or complete applications. This information can be recalled without a minimum of keystrokes.

HEADER. Information to be printed at the top of all or most pages of a document. This capability is frequently used in conjunction with automatic page numbering.

HYPERPOINT. A method of hyphenation by which words, instead of being hyphenated within an operator-defined end of line space, are hyphenated or moved to the next line.

HYPERNUMBER. A method of hyphenation where the corner represents a document and where an end-of-word hyphenation decision is required.

HYPERTEXT. A printer that uses a stylizing device and a ribbon to print characters. Examples of impact printers are the dot-matrix, matrix, and line printers.

KEYBOARD. A non-impact printer that uses a stream of ink to form characters.

INSERT. Function that allows text to be added to a document.

INTERLINE/TERMINAL. A terminal with an internal memory.

INTERCHANGEABLE POINT ELEMENTS. Printer elements in various styles and type sizes.

JUSTIFICATION. The ability of the system to print documents with an even right-hand margin.

KEYBOARDING. The process of entering information into a word processor using a keyboard.

Laser Printer. A non-impact printer that uses a beam of light to produce a hard copy.

LETTER QUALITY. A printer that generates output suitable for high-quality correspondence.

LINE PRINTER. A high-speed drum printer that prints what appears to be a list at a line.

LINE SPACING. Automatic line spacing (single, double, triple) specifications are stored in the document so that printer adjustments are not needed.

MATRIX PRINTER. An impact printer that uses small needles or pins to create characters formed by a combination of small dots.

MEDIA CONVERTER. A device that converts information from one type of magnetic-storage medium to another.

MICROCOMPUTER. A small, single-terminal computer.

MICROCOMPUTER. A computer that is more powerful than a microcomputer, usually consisting of instructions 16 or 32 bits (four or eight bytes) long.

MICROPROCESSOR. A miniature electronic circuit placed in a box that can perform word and data processing operations.

MEMORY KEY. A type of character stored in a way that enables it to be displayed with standard alphanumeric keys instead of special function keys. Memory key macros are often arbitrary.

MESSAGE TERMINAL. An "eot" command could be used to "estar margin.

MODERN TEXT. A communication device that converts data for transmission over telephone lines.

MULTIPLE-TERM SYSTEM. A multi-terminal system where the computer memory or other peripheral devices are shared.

ON-LINE-OFFLINE SWITCH. The dual capability of a word processor of sharing the facilities of another word or data processing system and operating independently.

OPTICAL CHARACTER READER (OCR). A peripheral device that reads typed copy and transfers the information in a word processor.

OPERATING SYSTEM. Software programs used to control the operation of the word processing or computer system.

PAGE NUMBERING (AUTOMATIC). The ability of a word processing system to automatically number document pages. When text is restructured and page numbers change, the system can correct the page numbers.

PAGE-ORIENTED. A system that stores text by page (i.e., in blocks of a maximum length). Editing operations, such as replacing, moving, copying, and reformating are usually much more expensive and lineconsuming than as word-oriented systems (which use line).

PAGINATION. The ability to divide a document into pages of a specified length.

PAGE-FITTING. A word processor capable of automatically adjusting the use of a page to fit the contents of the document.

PAGE FOUNTING. The setting of type using a photographic process.

PAGE NUMBER. Number of typed characters per horizontal inch.

PRINTER QUEUING. The capability that allows several documents to be queued for printing.

PROGRAM. A language, e.g., FORTRAN, BASIC, or COBOL, used in writing computer programs.

PRINT MENU. The ability of the system to interact with the operator by displaying a list of possible selections (menus) and allowing the operator to choose one.

PRINTING. The setting of type using a photographic process.

PRINT ON REVERSE. The ability of the system to print on the back of a page.

PRINTING. The number of typed characters per horizontal inch.

RECALL/DISPLAY. The ability of a word processor to store a form and display it when needed. The operator can combine the form with the new header form, or stores the form separately.

RECONSTRUCTIVE CAPABILITY. The ability of a word processor to move a word to the end of a line automatically if the word does not fit on the line being typed.

REWRITING. The word processing components, usually consisting of a keyboard and CRT, that allow an operator to perform the basic word processing tasks.

STORAGE CAPACITY. The total amount of information stored on the hard disk, or on hard disk.

STORAGE MEDIA. The most commonly used magnetic storage medium in word processing systems are the following: Magnetic tape—capacity of 10 to 1,000 lines of text Floppy (flexible) diskette—\~6" diameter, capacity of approximately 75 to 120 pages \~8" diameter, capacity of approximately 150 to 400 pages \~10" diameter, capacity of approximately 75 to 300 pages Disk—4"-3', 5`1/4", and 8" diameter.

STORAGE DEVICES. Devices such as printers, OCR readers, and communication interfaces (e.g., communication systems) that are connected to a word processing system to expand its capabilities.

STORAGE/PRINTING. The ability of a computer to selectively retrieve information from files, categorize the files, and generate reports as a result.

STORAGE. The ability to change page endings after a document is edited, reorganized, or if a new page length is desired.

SEARCH CAPABILITY. The function that allows an operator to selectively retrieve information from files, categorize the files, and generate reports as a result.

SEARCH/END OF LINE. The ability of a word processor to simply move a control to a particular character string in a document.

STACKED-RESERVE WORD PROCESSING SYSTEM. A multi-terminal system that allows one or more components, e.g., printers and the printer, to be in use at the same time.

STEREO PRINTER. A multi-terminal system that shares a control processing unit and may share other components.

SHEET FEEDER. A peripheral device, mounted on top of a printer, that automatically inserts card sheets into the printer, and spits the printed pages out the bottom of the printer.

SIMULTANEOUS PRINTING/EDITING. The ability of the system to print a document while an operator is working on another document.

SOFTWARE ADVANCE. Software is the collection of programs that control the operation of the hardware and the handling of the data.

SOFTWARE PROGRAMMABLE. A word processing system whose capabilities are defined by a program. The word processing manufacturer makes system enhancements by modifying the program.

TABLE OF CONTENTS OR INDEX GENERATOR. Ability of a system to automatically generate the headings and subheadings for a document.

TELECOMMUNICATIONS. The capability that enables a word processing system to send data using the telephone lines to other word processing systems or computers.

TOP-OF-PAGE ADVANCE. A printer feature that advances each sheet of paper or form automatically to the first line, according to the system choice.

UNDERSCRIPTING. The ability to underline text automatically during typing, instead of backspacing and underlining on a character-by-character basis.

UTILITIES. A set of routines contained with service tasks, such as file management, information recovery from damaged disks, disk preparation, disk checking, and system maintenance.

VERTICAL SCROLLING. The ability to move vertically a line at a time through the entire page, indicating text for which there is not sufficient room on the screen.

WRITING. The function that prevents a single line of a paragraph, figure, or heading from printing at the top or bottom of a page.

WORD WRAPPING. The ability of a word processor to move a word to the next line automatically if the word does not fit on the line being typed.
Bibliography


Appendices

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APPENDIX A
Typing survey

Purpose of the survey
This survey is designed primarily to determine how much typing and what kinds of typing you receive during the period of the survey. The booklet contains a series of daily log sheets on which you will describe quickly the typing work you receive. As you will see when you read the instructions, this is not a test of your productivity. We are seeking information on the volume, nature of typing, and time needed to produce court documents.

Survey dates
The typing logs have been designed to collect information on all of the typing jobs you receive over a period of three weeks. The survey should begin on three Mondays and conclude at the end of the day on Fridays. These mailers have been provided for the return of completed survey forms at the end of each week. They should be put in the mail at the end of the day on the following dates:

- Mail forms for first week: _____________
- Mail forms for second week: _____________
- Mail forms for third week: _____________

These booklets should be sent to:

If you have any questions please feel free to call: _____________

Instructions for the log sheets

General instructions
Please start a new log sheet for each workday. If on some days you need more space than is provided on a single log sheet, simply continue to log that day's jobs on the next page of the booklet. Extra log sheets have been included to allow for heavy typing days.

If on a given day you do no typing, write "no typing" or "no exchange of opinions" on the respective log sheet for that day and start a new one for the next day. If you are absent from work at any time during the period of the survey, put your name and the date you were absent on separate sheets for each day you are absent, and write "absent" on each of those sheets.

The logs have been designed to allow you to fill in the necessary information quickly. They should not take more than a few minutes per day to complete. Each job should be recorded immediately after it has been completed. It is important that you record all of the typing you do regardless of the size of the job.

Filling in the log sheets
1. Document name. In this space provide a brief, descriptive name for each document you type. For those documents that you will later be asked to revise, this name should be unique to the document you are typing. Each time a document is returned to you for revision typing, you should use the same name you previously used to identify the document.
2. Author's initials. In this space, put the initials of the judge, law clerk, or court administrator who gave you the document to type.
3. Machine used. Note here which machine you used (To

Typing survey

Note: A preliminary step in assessing a court's need for word processing equipment is a survey of the amount of typing done, the types of documents, the amount of revision, and the total time consumed in typing. The following suggested instructions will explain to the typist the purpose and method of the survey. A log for recording the results is included.

TYING SURVEY
GENERAL INSTRUCTIONS

Purpose of the survey
The court is studying its typing production for the possible introduction of word processing equipment. The results of this survey will help in determining the equipment and features that may be needed to satisfy our word processing needs.

Typing logs
This survey is designed primarily to determine how much typing and what kinds of typing you receive during the period of the survey. The booklet contains a series of daily log sheets on which you will describe quickly the typing work you receive. As you will see when you read the instructions, this is not a test of your productivity. We are seeking information on the volume, nature of typing, and time needed to produce court documents.

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1. Document name. In this space provide a brief, descriptive name for each document you type. For those documents that you will later be asked to revise, this name should be unique to the document you are typing. Each time a document is returned to you for revision typing, you should use the same name you previously used to identify the document.
2. Author's initials. In this space, put the initials of the judge, law clerk, or court administrator who gave you the document to type.
3. Machine used. Note here which machine you used (To
APPENDIX B
Request for proposal,
Rhode Island Supreme Court information system
and site visit report

The Rhode Island Judicial Systems & Services
(RIJSS) is hereby soliciting responses from vendors
for an integrated word-processing data-processing
system for the Rhode Island Supreme Court Manage-
ment Information System.

The selected vendor will be required to meet the
selection criteria as delineated in a later section.

However, if a single vendor cannot meet all of the
selection criteria, certain trade-off decisions, weight-
ing the relative importance of each individual cri-
terion and the degree to which each vendor meets
said criterion, will be made.

Accordingly, vendors may submit, if they so desire,
more than one proposal for consideration.

Background

In 1976 the Rhode Island Supreme Court began a
comprehensive review of its workload and pro-
cedures. The purpose of the program was to find new
ways to deal with the increase in filings and a
growing backlog. The program focused on both
judicial and administrative aspects of the court. So
far the program has yielded many recommendations,
and it has also begun to have tangible results.

One example is the significant increase in disposi-
tions over the last two years. This has occurred
mainly as a result of several innovations introduced
to "screen out" cases that can be disposed of without
oral argument and a full opinion. These innovations
include the following: adopting more stringent
criteria in granting petitions for certiorari; scheduling
preargument conferences in those cases where there
is a good possibility for settlement; and screening out
appeals that are controlled by already existing case
law or statute.

The results are obvious. The number of dispositions
before argument has increased 65 percent in two
years, and the total for the 1978-1979 term was
exactly twice what it was in 1970.

The increase in dispositions before argument has
been very important. During the last six years the
court has experienced a large growth in the number
of cases docketed. For every five cases docketed in
1970, seven were docketed in 1979. While dispositions
after argument have increased, the numbers have
not been large enough to close the gap between filings
and dispositions. Consequently, the increase in dis-
positions before argument has been the key to keep-
ing up with new filings and avoiding further growth
in the backlog.

Nevertheless, despite these accomplishments the
court's workload has continued to expand. Even
though the total number of pending cases remained
the same between 1978 and 1979, the number of direct
civil and criminal appeals filed has increased. The
additional criminal and civil actions that must be
disposed of after oral argument require more time
and effort from the court. The prospect of a constantly
increasing workload has forced the court to intensify
its search for ways to use resources more effectively.

One need that has become evident is for an efficient
information system. The need exists on both the
judicial and administrative side of the court. While
not an end in itself, an information system is
a means by which the court can increase effectiveness without
adding personnel.

In the course of the improvement projects described
above, the court has determined that the following
capabilities must be developed.

Word processing

A preliminary survey of the options available to
the court shows that it is feasible to develop a word
processing capability as part of an information
system. Such a capability is essential to the court's
effort to make better use of existing resources. Word
processing would have four primary applications:

• opinion drafting; editing; indexing; and publish-
ing, including telecommunications with a com-
puterized typesetter;

• legal/administrative directories and reports, such
as lawyer lists, disciplinary mailings and reports,
judicial plans, budgets and annual reports;

• automated legal research and interface capabil-
ities with LEXIS and WESTLAW (legal time-
sharing services);
The court estimates that the introduction of a word processing capacity, itself, the lower jurisdictions, and the bar in general.

The configuration envisioned includes, in addition to a central processor and main memory,
- 7 CPUs located on various floors at 250 Superior Courts Center
- 3 printers (2 letter quality, 1 line printer) capable of handling both on-line and batch-printing requirements
- disk storage capable of handling data storage as outlined in the design statistics, plus any system overhead (program libraries, etc.)
- communications capabilities to the host CPU
- backup (while the Supreme Court does not have the high backup requirements of, for example, a funds transfer application, a failure that would leave the system unavailable for more than half a day with any frequency (i.e., less than 99 percent uptime) would have serious consequences; accordingly, some sort of "cold standby" backup would be required)
- environmental requirements (electricity, flooring, temperature, humidity, lighting, etc.)
- as meets the information will be used to determine preparation costs, as the equipment will be installed in a new office environment at the Supreme and Superior Courts

A. Goal
To complete the development of a comprehensive, automated information system for the Rhode Island Supreme Court.

B. Objectives
1. To acquire and install hardware that can support the information system that has been designed for the court.
2. To develop, in phases, the three basic functions which the system must have:
   - on-site word processing (text editing) and storage with the ability to provide random access to stored material, cumulative indices of current decisions, citations and key words (when those items are specified), and a means of transferring text to a computer typewriter
   - on-site data processing and storage for selected applications
   - simultaneous communications with a host computer at the Rhode Island Division of Information Processing

II. Evaluation criteria
Eight major criteria have been identified. In order of importance they are as follows:

A. Reliability
The vendor must guarantee a period of delivery. To minimize this risk, one question that will be raised is, "Is there a track record in other systems as to the probability of it being able to handle the system in the future?"

B. Credibility
A fixed price for the entire system must be specified, indicating the costs associated with startup, systems design, vendor support (education, training, etc.) documentation, implementation, and maintenance.

D. Expandability/Feasibility
An anticipated cost of $22,600 for annual growth of 15 percent over a project life of seven years means that the system must be able to handle three times the initial capacity. This applies to data stor­age, transaction throughput, and printing. In addition to an increase in the same transac­tions, there will be enhancements to the sys­tem, both known (hardware interface to another CPU) and unknown. A full-time pro­grammer/analyzer will be assigned to this project to participate with the vendor in all phases of the project so that the user will be able to maintain and enhance the existing capabilities in the future. To meet this criterion, the vendor should show:

1. How the initial hardware and software configuration can be expanded to process three times the volume and how it can be further expanded to meet other known and unknown requirements. Costs of expansion should also be presented.
2. The role our programmer/analyzer would play.

E. Development time
Since one of this project's goals is to speed judicial processing, timeliness is essential. The vendor should indicate how long each component will require and how this timing commitment will be met.

F. Reliability
The vendor should comment on the reliability and service of the hardware along with what warranties (warranties, etc.) would be avail­able to ensure software reliability.

G. Financial stability
One risk in dealing with outside vendors is the possibility of financial failure during the project. To assure in evaluating this likeli­hood, the vendor should include financial information.

H. Geographic proximity
A means of reducing another of the risks inherent in dealing with an outside vendor is to facilitate the ease of communications between vendor and customer. The vendor should indicate the location of the office from which development and service will work.

III. Bid proposal format
A. General
The bidder's response to this Request for Proposal shall be made according to the specifications set down; in this section, both for content and form. As the bid proposal shall be used to determine the bidder's capability, it should be complete and accurate in every detail. The proposal should be practical, clear, and coherent.

The Supreme Court does provide no finan­cial assistance to any bidder for preparation of the proposal. However, the court will make available to bidders relevant user data and information.

The bidder should not necessarily limit the bid response to the performance of the ser-
Bid Proposal is to be completed in six sections, with a cover page identifying each section. Pages in the proposal are to be numbered consecutively with the Table of Contents described as page 1. Proposals must be presented in the following sequence:

1. General
2. Hardware/software
3. Vendor support
4. Schedule
5. Cost data
6. Statement of bidder's qualifications

B. Specific format

The bid proposal is to be completed in six separate sections, with a cover page identifying each section. Pages in the proposal are to be numbered consecutively with the Table of Contents described as page 1. Proposals must be presented in the following:

1. General
2. Hardware/software
3. Vendor support
4. Schedule
5. Cost data
6. Statement of bidder's qualifications

Specific outline instructions by section follow.

1. General
   a. Submit with your proposal a letter of transmittal; a brief executive summary with conclusions and recommendations; and a completed Rhode Island Division of Purchases Bid form (see attached).
   b. Submit information on the device proposed as well as its capacity or where appropriate.
   c. Provide a complete description or technical manual for each piece of software:
      i. language supported
      ii. ease of programming
      iii. flexibility in format of inquiry, update, output
      iv. communication capabilities with host computer
   d. Provide detailed descriptions of features of the software that will assist in protecting the privacy and confidentiality of the stored data, as well as unauthorized access to the data.

2. Hardware/software
   a. Describe the system used for the identification and reporting of software malfunctions. Clarify the relationships between the system and the user to report hardware malfunctions.
   b. Discuss any additional chargeable software packages, features or languages that the bidder feels might be of interest, with changes and requirements for each feature.
   c. Vendor support
      i. Describe the capability of providing training for analysis, programming, and operational document. The scope of training, frequency, and location as well as associated costs. Also state whether hardware similarity to the proposed is available for training prior to delivery.
      ii. For each person whom the bidder will make available to the proposal will be delivered no later than 12 noon on May 23. An announcement of the vendor selected for purpose of contract negotiation will be made on approximately June 6.
   d. Delivery schedule
      i. State the date on which all hardware and software required for initial operations could be located on site.
      ii. State the date by which all hardware and software in your proposal could be fully operational.
   e. Cost data
      i. A complete disclosure of all cost to the leasing agent associated with the system's installation, purchasing, transporting, installing, and maintaining operational all hardware in the bidder's proposal must be made available in this section.
      ii. Use the form provided plus any additional information that you believe relevant for this purpose.
      iii. Discuss and explain all of the available plans (purchase, lease, rental) of the system.
      iv. Vendor support costs (education and training, location, and price for each. Also indicate proprietary rights to software.
      v. Communication capabilities with host computer
   f. Calculation of service charges (technical manuals and programming aids, quantity of each cost)

3. Vendor support
   a. Submit each chargeable software package, routine or function which is included in the vendor's proposal. State the monthly rental cost and price for each. Also indicate proprietary rights to software.
   b. List and identify any other cost to be charged to the leasing agent relative to the procurement, installing and making operational the equipment and software included in the bidder's proposal (minimum reference to Part II, G, 2).

4. Statement of bidder's qualifications
   a. Complete copy of Form 4 concerning bidder's qualifications and submit as part of the proposal package. Include any additional information that the bidder considers to be pertinent to his qualifications.
   b. Provide the name, address and telephone number of the individual(s) within the bidder's firm authorized to negotiate and sign a binding contract in the event that the bidder's proposal is accepted.

5. Cost data
   a. The processing function will be the first to be developed, primarily because of the large backlog of of statistics that have yet to be published. The court has decided that addressing the word processing needs immediately is not only a cost-effective approach but also avoids compounding existing problems. If possible, the development of the other functions (data processing and communications) will start before the word processing is done. The court anticipates that the word processing software package provided by the vendor will meet most of its needs. There are, however, applications that are particular to the court.
   b. The local hardware must be able to handle all functions (word processing, telecommunications, and data processing) simultaneously without degradation.

6. Statement of bidder's qualifications
   a. The total, standalone data processing system will be programmed (in COBOL) to handle transactions and files that are not maintained solely within the court. It will also be designed to allow the operators to update reports prepared on the host system and transmitted to the local system. After updating is complete, the new versions will be communicated to the host system, where they will be updated to the local system. As indicated above, the local hardware must be able to handle all three functions (word processing, telecommunications, and data processing) simultaneously without degradation.

C. Data processing (phase 2)
   a. The state's automated court system will be programmed to handle data processing and telecommunications. Such data processing includes the collecting, storing, and reporting of data to the court's statistics. This will be allowed until the telecommunications and data processing phases are complete.
   b. Telecommunications (phase 2)
      i. The system will be used both to display and to update master files. This communications capability is essential to the court's aim of building a distributive information processing system. A comprehensive statewide judicial information system requires that information about cases be available to other courts and other users. Furthermore, it is essential that case tracking and comprehensive criminal histories have (where legal) relevant information from all the courts. A telecommunications capability allows this. Nevertheless, there are numerous applications that should be developed and maintained more appropriately on the mainframe. An accounts receivable system for fees, costs, and fines is a good example of such an application. The capabilities of cumulative indices (mentioned above) as well as examples of interoffice processing are additional examples of examples where a mainframe would be most appropriate. Such a mainframe with a communications capability is the most cost-effective option.

D. Specifications
   a. The three basic functions which the system must perform will be:
      i. Word processing
      ii. Data processing (phase 3)
      iii. Telecommunications
   b. Telecommunications
      i. The host system (at the Providence County Courthouse, 7th floor, 250 Benefit Street, Providence, Rhode Island 02903) provides a local, standalone data processing system. The local, standalone data processing system will be programmed (in COBOL) to handle transactions and files that are not maintained solely within the court. It will also be designed to allow the operators to update reports prepared on the host system and transmitted to the local system. After updating is complete, the new versions will be communicated to the host system, where they will be updated to the local system. As indicated above, the local hardware must be able to handle all three functions (word processing, telecommunications, and data processing) simultaneously without degradation.

E. Performance requirements
   a. Court response time
      i. The CRTC response time is measured as the elapsed time between the depression of the "send" key and the appearance of the screen of the first-character of the response. Based on the
mix of a typical day's work, 90 percent of the
transactions must have a response time within
3 seconds of a 98 percent of the transactions
must have a response time within 8 seconds.
B. Printer response time
A hard copy of a document, instead of a new
screen, is produced by a number of CRT
transactions with response time measured as the
time between depression of the "send" key and
the appearance on the screen. Based on the
projected mix of transactions, 98 percent of the
on-line printing must have a response time of less than
2 minutes.
VI. Detailed requirements
A. Opinion processing
1. There are five general requirements on
processing opinions:
that the current level of security be
maintained
that the required indices be generated
via the initial entry of the text onto
magnetic media
that the headnotes be appended in such a
way as to allow for easier accessing as an
index
that the opinions awaiting publication
be entered on magnetic media simulta-
nously with the opinions ready to be filed
that the proofreading process be reduced
to one proofreading
2. The project will address the Supreme
Court's need to publish the Rhode Island
Appeals Court opinions promptly. At present
the publication of these reports includes the
following stages, depending on the indi-
vidual justice's preference: the initial draft-
ing of the opinion; or revision of the opini-
on to finalization. It will end with the publica-
tion of the Rhode Island Reports. The
highest priority will be given to the simul-
taneous entry of the opinions awaiting
publication and the opinions currently being
filed.
4. The secretary to the assigned justice will
require the capability to:
• revise only portions of the opinion
• copy standard text from another docu-
ment into the current opinion
• move sentences and paragraphs within
the current opinion
• search through the opinion for a word, or
words, and replace these with other
words
• enter heading information only once
• repaginate automatically
• change the format of the opinion after it
has been keyed
• type without regard for hyphenation or
mailing
• locate the sections to be revised without
searching through each page
5. The court secretary will require the capa-
bility to:
• access all case title and citations in the
opinion, search and change
• proofread the opinion only once
6. The administrative assistant to the chief
justice will require the capability to:
• store the headnotes as glossaries
• access the required information
• generate the indices automatically
B. Supreme Court management information
system
The Supreme Court management information
system project will address the Supreme
Court's need to monitor and track cases as
they progress through the Supreme Court
judicial process. The system will encompass
the following: a database of the Supreme Court's
caseload: criminal appeals, including state's
appeals prior to trial; civil appeals, including
certified questions of law; petitions for writs of
certiorari; petitions for writs of habeas corpus;
and other miscellaneous writs and petitions.
The data collection process will begin with the
filing of a notice of appeal and will end with receipt of
the final Atlantic Reporter citation. Both operational and
management reports will be considered by the
information system. As usual, the outputs
with the highest priority for automation will be
implemented first.
There are three general requirements for
the Supreme Court's clerk's office that the
current level of security be maintained; that
the Supreme Court staffs are not interrupted; and
that the rules and procedures pertaining to
the appellate process serve as constraints.
The Supreme Court clerk's office has a need
for detailed case information to assure that
case files are complete and to schedule hear-
ings on cases, as well as a need to produce
form notices that could be prepared automat-
ically. The administrative assistant to
the Chief Justice and the Appellate Screening
Unit under his supervision also need some
detailed case information to identify proced-
ural errors or missed deadlines.
Summary information on Supreme Court
activity and pending cases is required by the
chief justice and associate justices of the
court to support their scheduling and policy
decisions.
The accounting unit for Supreme Court
activity is the appeal or mixed appeal
(original action). This unit is not necessarily
equal to defendant or case units used in trial
courts. A single case or even defendant may
account for several appeals while a number of
cases or defendants may be consolidated
into one appeal. It is acknowledged that
while measures of Supreme Court activity
require dispositions in terms of appeals or
original actions, dispositions may also have
to be recorded according to trial court cases or
defendant units.
Court of appeals tracking appeals must begin
in the trial courts where these appeals origi-
nate. Casework reports on the time taken at
each stage in the appellate process require
that processing time be calculated beginning
at the point where the appeal is docketed
in that court. Counting trial court
dispositions and appeals filed before
they are perfected and transferred to
the Supreme Court is necessary for calculating
appeal rate and compiling other information
useful for appeals research and planning.
1. Monitoring Supreme Court activity and
workload
• court activity summary: monthly and
annual statistical reports of filings, trans-
actions, and dispositions; filing by offense
category, by trial court or other source, by
basis of jurisdiction, and by type of
appeal; dispositions reported by manner of
disposition and the decision of the
court
• summary of pending cases: monthly and
annual statistical reports of filings await-
ing disposition; pending cases reported
by offense category, by age (within sev-
eral ranges), and by stage in the ap-
peals process
• average processing times: monthly and
annual statistical reports of the median
time between processing stages; times
reported by type of appeal
• caseload projection: monthly and annual
tracking report of trial court decisions and
of appeals filed in trial courts; decision
reports by offense category; appeals
reported by prosecution strategy; appel-
losing party, and by stage in the process;
both decision and appeals reported by
trial court
2. Screening appeals
• exceeded time limits: monthly exception
reports listing cases where time limits
have been exceeded; cases rejected by any
of several stages; exceptions reported by
stage at which deadline was missed and by
party responsible
• sentence review cases: monthly list of
those appeals to the Supreme Court that
concern cases where sentence review ap-
ppeals have been filed to the court;
these appeals reported by the processing
stage of the sentence review in the trial
court and by reprocessing the review in
that court
3. Docketing cases, notifying parties, and
scheduling hearings
• docked case list: monthly list of all appel-
late process transactions for each appeal
or original action
• notices and requests for briefs: form let-
ters sent to attorneys at the time an
appeal is docketed
• ready for oral arguments list: monthly
list of all appeals cases ready to be
docketed for oral argument by type of
appeal and with indication of months
end of case or in the appellate process,
arranged by pre-assigned priorities
After selection and installation of a system in 1980, a report of its equipment and operation was made in January of the following year.

**SITE REPORT**

**Overview**

After selection and installation of a system in 1980, a report of its equipment and operation was made in January of the following year. The system was selected for its capability to handle a wide range of legal and administrative tasks, including the preparation of opinions, correspondence, and other legal documents.

**Equipment**

The system includes a Wang 5600 word processor, a Wang 5400 word processor, and a Wang 5200 word processor. The system also includes a Wang 5100 word processor, a Wang 5000 word processor, and a Wang 4800 word processor. The system is equipped with a Wang 1500 word processor and a Wang 1400 word processor. The system also includes a Wang 1300 word processor and a Wang 1200 word processor.

**Function**

The system includes a Wang 5600 word processor, a Wang 5400 word processor, and a Wang 5200 word processor. The system also includes a Wang 5100 word processor, a Wang 5000 word processor, and a Wang 4800 word processor. The system also includes a Wang 1500 word processor and a Wang 1400 word processor. The system also includes a Wang 1300 word processor and a Wang 1200 word processor.

**Transaction Volumes/Storage Requirements**

<table>
<thead>
<tr>
<th>Function</th>
<th>Input (lines/day) (50 characters/line)</th>
<th>Output (lines/day) (50 characters/line)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Average</td>
<td>Minimum</td>
</tr>
<tr>
<td>Opinion drafts</td>
<td>900</td>
<td>200</td>
</tr>
<tr>
<td>Opinion indices</td>
<td>185</td>
<td>55</td>
</tr>
<tr>
<td>General orders</td>
<td>18</td>
<td>12</td>
</tr>
<tr>
<td>Headnotes</td>
<td>1700</td>
<td>410</td>
</tr>
<tr>
<td>Form letters</td>
<td>1500</td>
<td>1000</td>
</tr>
<tr>
<td>Reports</td>
<td>1300</td>
<td>1000</td>
</tr>
<tr>
<td>Case processing*</td>
<td>900</td>
<td>500</td>
</tr>
<tr>
<td>File maintenance*</td>
<td>3000</td>
<td>2500</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Storage Requirements (characters/day)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Function</td>
</tr>
<tr>
<td>Opinion</td>
</tr>
<tr>
<td>Indices</td>
</tr>
<tr>
<td>Form letters</td>
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APPENDIX C
Telephone survey of five courts using word processing

Note: Information was gathered in 1983 on the word processing systems used in five courts in order to determine locations for site visits.

<table>
<thead>
<tr>
<th>Court</th>
<th>System used</th>
<th>Configuration</th>
<th>Applications</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alabama Supreme Court</td>
<td>A. B. Dick Magna III</td>
<td>Standalone (3 terminals)</td>
<td>Text editing, Personalized letters, Mass mailings</td>
<td>They are using the glossary capability for sentence/phrase storage and are beginning to do alphanumeric sorts. The A. B. Dick system is not suitable for preprinted forms.</td>
</tr>
<tr>
<td>District of Columbia</td>
<td>Compucorp</td>
<td>Combination of standalone and shared logic</td>
<td>Text editing, Personalized letters, Mass mailings</td>
<td>Standalones in executive offices, chief justices, retired judges chambers, court of appeals. Shared logic system in court reporters section. Programs are being written in BASIC to determine what can be done on word processing.</td>
</tr>
<tr>
<td>Texas Probate Court (Houston)</td>
<td>Alpha Micro</td>
<td>Shared logic (5 terminals)</td>
<td>Text editing, Records processing (operational case processing), Personalized letters, Mass mailings</td>
<td>They are beginning to set up files for alphanumeric sorts and selective retrieval.</td>
</tr>
</tbody>
</table>

Court
West Virginia Supreme Court of Appeals
Person contacted
Ted Philpines
Assistant to State Court Administrator
System used
IBM Displaywriter
Configuration
Standalone
Applications
Text editing (opinions)

Court
Court of Appeals of Georgia
Person contacted
Alton Hawk, Clerk
System used
Lanier
Configuration
Standalone (3 terminals)
Applications
Text editing

Court
Texas Probate Court (Houston)
Person contacted
Judge Pat Gregory
System used
Alpha Micro
Configuration
Shared logic (5 terminals)
Applications
Text editing, Records processing (operational case processing), Personalized letters, Mass mailings

Comments
They were at one time entering docket on word processing systems, but have reverted to manual method.
National Center for State Courts

The National Center for State Courts is a non-profit organization dedicated to the modernization of court operations and the improvement of justice at the state and local level throughout the country. It functions as an extension of the state court systems, working for them at their direction and providing for them an effective voice in matters of national importance.

In carrying out its purpose, the National Center acts as a focal point for state judicial reform, serves as a catalyst for setting and implementing standards of fair and expeditious judicial administration, and finds and disseminates answers to the problems of state judicial systems. In sum, the National Center provides the means for reinvesting in all states the profits gained from judicial advances in any state.

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