PN-ACE-678
100960

Administration of Justice Support Project
Contract No. 263-C-00-95-00134-00

Planning, Acquiring, and Implementing Court Automation & Re-engineering
Introductory Workshop
January 1997
AOJS
USAID/Cairo

A

AOJS/AMIDEAST PROJECT
TASK 5 Automation and Streamlining of Procedures at Pilot Courts
Preliminary Analysis Workshop
January, 1997

Planning, Acquiring, And Implementing

Court Automation & Re-engineering

Introductory Workshop

B-

Planning, Acquiring, And Implementing Court Automation & Re-engineering Introductory Workshop

Table Of Topics

I Introduction
- A Workshop

II Purpose Of Automating Court Systems

III The Systems Development Life Cycle

IV Keys To Successful Automation
- A Management Strategies
- B Leadership
- C MOJ Leadership
- D Leadership Checklist
- E Planning
- F Decision Making
  - 1 MOJ Management Structure

V Managing Projects
- A Managing Change
- B Managing Expectations
- C Recognition Of Need
  - 1 MOJ Problems Definition

VI Typical Court Problems

VII Goals And Objectives
- A MOJ Objectives Definition

VIII In Depth Analysis
- A Describing The Existing Work Environment
- B Analyzing The Current Manual System
- C Selecting Processes For Automation

IX Determining The Functional Requirements Of The System
  - 1 MOJ Solution Options Definition

X Software Development Options
- A Acquiring A New System
- B Custom Development
- C Hardware Technology Options

XI Acquisition

XII System Design And Development
- A Software Design And Development Process

XIII Core Functions Of Case Management Applications

XIV Sample Court Applications
- A Case Folder Management
- B Civil And Commercial Case Processing
- C Service Tracking System
- D Financial Management

XV Implementation And Operation
- A Installation
- B Training
- C Start Up
- D Operation

XVI WRAPUP
- A Questions and Answers

XVII Glossary Of Terms

Planning, Acquiring, and Implementing Court Automation & Re-engineering

Workshop

The purpose of this workshop is to help the courts effectively acquire and implement technology By understanding automation issues processes decision points structures options consequences and problems the court manager is better prepared to face the realities of case management systems development

The first step in the process is the creation and acceptance of a Court Automation Strategic Plan The strategic plan will

- provide guidelines for developing the requirements analysis architecture strategies and applications concepts for court automation and re engineering
- establish the scope boundaries direction and completion criteria of the effort
- establish the priorities of the automation objectives so that project efforts may be channeled into achieving those goals
- ensure that the expenditures for automation funds will be toward cost effective and efficient systems solutions

To write the strategic plan we must discover the purpose scope objectives assumptions definitions the business background information management structure prioritized system goals the associated critical success factors and the implementation strategy

This workshop will begin the collection of this information

Purpose of Automating Court Systems

Information consumes the attention of its recipients it devours resources allocated to its collection management and distribution New and better (and more expensive) tools are available to try and satisfy the information appetites of organizations trying to remain competitive, to operate with growing work loads and shrinking resources or just to survive

In the court improving service by applying existing and emerging technologies creates a new set of opportunities and problems For example thoughtful reengineering requires strategic changes in organizational structure in the manner in which courts do business with parties and lawyers and in the role of court managers Reengineering especially when done with technology will not only change how courts do business it also will affect and perhaps radically alter what their business is

Given the significance of these changes courts must give careful thought to appropriate ways to identify acquire and implement technology

Automated support systems benefit the courts in many ways Among these benefits are

Reduction of Repetitive Tasks

Among the most obvious benefits is multiple outputs from single inputs For example a clerk enters the name of a party into an automated information system at case filing That single entry can be used for many purposes such as system generated case lists name indexing, and document generation

Enhancement of Data Quality

Courts use two primary mechanisms to enhance data quality-- logical editing and exception reporting Logical editing increases the accuracy of the system s information by performing some basic checks on incoming data For instance the system may compare the current date with that of an alleged violation If the violation date does not precede the current date by the correct number of days an error message is generated and the incorrect date is rejected

Exception reporting also assures the quality of information Supplied with suitable instructions the

computer can keep track of incomplete records For example, if cases require certain documents to be filed within a fixed number of days the computer can search identify and list cases that have missed the deadline

Increased Information Accessibility

Computers allow many individuals to view the same information simultaneously If one person has physical possession of a file others may obtain information about that case from the computer The computer allows viewers to find and access case information in multiple ways (e g through inquiries using party names case numbers or dates) Additionally any computer system has the potential for improving and speeding up on site and remote access to vital case information Through devices such as video display screens and modems record information may be retrieved in seconds from many locations

Increased Organizational Integration

Most court processes depend on information By allowing information to be shared between divisions and departments the computer helps integrate the organizational components of the court These organizational units become more functionally interdependent and less isolated because they use and rely on each other s work

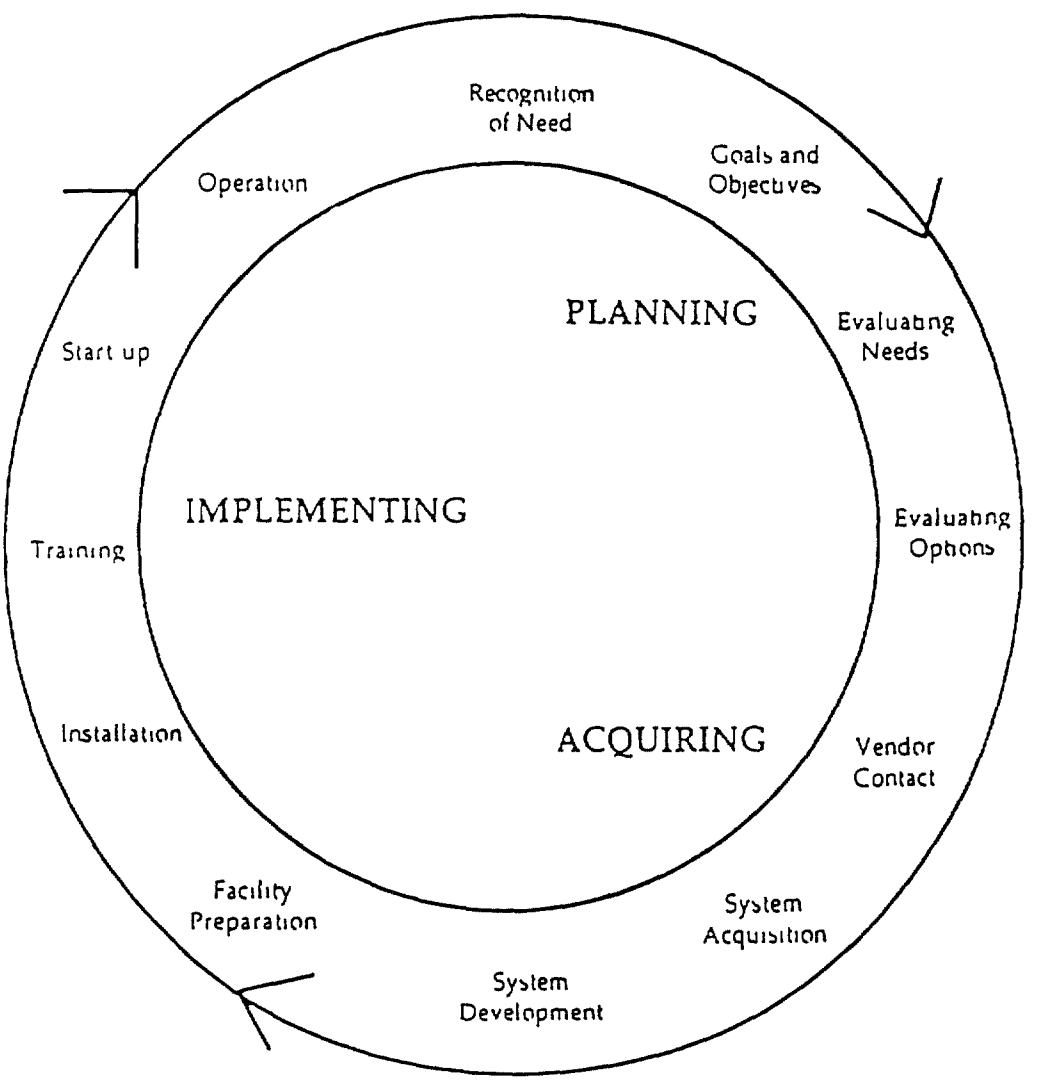
Enhanced Statistics and Monitoring

Number crunching is a strength of the computer It counts samples and analyzes at a level that if done manually would be laborious and expensive Armed with information and analysis provided by computer systems court leaders can enhance judicial operations planning and policymaking

The Systems Development Life Cycle

The systems development life cycle (SDLC) is a term that describes the process of building installing and operating computerized information systems It is a life cycle because every system has a beginning and an end It is cyclical because the beginning and ending points are joined as work stops on one system it begins on its replacement The systems development life cycle illustrates the development process for court case management information systems Too many court managers view the systems development process as a construction project that is once the building is complete little needs to be done (except occasional remodeling) for the next 50 years In reality the initial development process is only the beginning of an ongoing cycle The steps in the SDLC are planning acquiring/developing, and implementing

Figure 1, The System Development Life Cycle



The Real World

The real world is not like a textbook The challenge is to make ideas work in surroundings that are not so hospitable where exceptions and the need for adaptation are the rule

In the real world complete system specifications do not exist Nobody in an organization knows everything about how the organization works though someone knows about each part Chances are they will not remember all the important details when asked but will be able to describe what is wrong with the system after installation No one can describe exactly what they want in a system and what they want is not always the best solution Nor is it always what they want later on after implementation

In the real world it is impossible to predict accurately how long it will take to do a job or how much it will cost If the court knew in advance the full duration and total expense of any project it might not pursue it or the funding body might decline to provide the necessary resources
In the real world almost anything can be done but not everything Each decision eliminates possibilities
In the real world personalities must be accommodated politics may win over reason

Despite these obstacles and difficulties most software development projects are successful But the more knowledgeable and experienced the project team the more likely they will be to anticipate and overcome problems and complete the job in a satisfactory manner

The Problem of Automating Courts

I do not claim to know everything about court automation
I do however claim the title of veteran I have been in the trenches and fought in the battles I have planned and managed I have succeeded and I have failed I do not know everything but I know many things My hope is that the things that I have learned along with your court experience and knowledge we will succeed

I would like to review six distinguishing characteristics that best explain why court automation is so difficult

Court Processes Are Complicated

Here is an analogy to the court process Predicting when and how a case will be resolved is like throwing a stick in a river and guessing where it will end up and how long it will take to get there Imagine that the river is crashing down a mountain side being ripped by boulders and fallen trees settling in pools here and there but never staying long When you throw a stick in a tumbling stream you never know where it will emerge It may reach the center of the flow and disappear from sight in a second or two It might get caught in a web of branches and not move for years It might end up swirling in an eddy going around and around never getting anywhere

If guessing what will happen to a court case is similar to guessing how a piece of wood will behave in a river then automation of the judicial process becomes a game of statistical probability more than an exercise in architectural science Computers do very well with nice clean tidy rules The tangled web of uncertainty that is our legal system almost defies automation

Data Structures Are Intricate

Databases consist of individual pieces of information called fields or data elements A case number filing date disposition code or defendant name could be considered a field The designer must be concerned with identifying the data elements that are essential, how much space
each will require how many times each will be used and where and how they will be used
Determining how data elements are used is one of the greatest technical challenges of designing court automation These decisions are based on a determination of which of three kinds of relationships exist between the individual data elements The types of relationships are

Simple or one to one relationship
Hierarchical or one to many relationship
Relational or many to many relationship

A simple relationship exists when two data elements always occur together and there is only one of each A simple relationship usually would exist between the case number and the date of filing The same could be said for defendant name date of birth, gender current address etc This is a one to one relationship

A hierarchical relationship exists when one field is dependent on another and can occur multiple times For example dozens of court events can occur in a single case but each event usually applies to a single case This is a one to many structure, one case having multiple parties events etc These types of relationships are more difficult to model in the computer system, as they would be on paper

The final and most difficult relationship is the many to many or relational structure In this scenario fields are related but independent of one another For example a case might have many attorneys associated with it but those attorneys might be involved in dozens of other cases If a court automation system were created with a hierarchical relationship, attorney information would be entered for every case to which an attorney was assigned If the attorney s addressed changed it would be necessary to identify and change all that attorney s cases

Several important many to many relationships exist in a court case management system between cases people time and money

Courts Organize Work Differently

Each court has its own way of doing things that make adapting a uniform automation system a great challenge Users never seem to be satisfied with the system design because it doesn t fit their internal procedures This is the main reason that court automation is so difficult to transfer from one place to another

Judicial Technology Is Not Mature

In spite of the fac that courts have been automating for decades the technology in use is not mature It is changing so rapidly that most systems are obsolete shortly after implementation While computers are used to address many routine and repetitive tasks in the courts their potential for helping with more complex work is yet to be realized

Many Courts Are Not Ready For Automation

As will be reviewed later courts must be prepared for automation It requires a certain level of knowledge and skill that often is missing in court leadership and staff Tradition bound procedures limited resources a lack of training and unwillingness to change contribute to the problem

Keys To Successful Automation

Management Strategies

Management strategies play a key role throughout the process Management strategies help fit the systems development life cycle into the real world of day to day court operation and management

Leadership
Planning
Decision Making
Managing Projects
Managing People
Managing Change
Managing Expectations

Many projects fail because they take short cuts in the systems development life cycle Others fail even though they follow this structured process to the letter Lack of attention to management issues can explain many of these failures

Leadership

Information systems development is a long term project It takes a commitment of time money and people who must be able to work diligently and patiently to achieve the successful implementation of the technology It is definitely not for the impatient

All large projects require four leadership roles (sponsor champion integrator and manager) The sponsor is usually a policy level person who is skillful in shaping the politics of the organization to ensure that the required money staff and other resources are available to the project The champion carries the message of the benefits of the project marketing them to the various organizational constituencies The integrator resolves the conflicts of competing organizational priorities and builds consensus through communication skills The manager orchestrates the administration of the project according to the project plan A person may fill more than one role or a role may be shared by more than one person

Sponsor? _____
Champion? _____
Integrator? _____
Manager? _____

Leadership Checklist

Leadership is critical in successful automation projects

Vision

Leaders must have a clear picture of where the court should be and how to get there Distorted vision in project leadership (unrealistic expectations erroneous beliefs about the capabilities and limitations of technology inadequate comprehension of the complexity of the judicial process quixotic budgeting and time scheduling) is a sure prescription for failure despite the caliber of project staff or the quality of the finished product

Mandate

Court staff must understand that the judges administrators clerical staff and technicians assigned to the project are acting at the direction of the presiding judge supreme court judicial council or whoever is administratively responsible for the judicial system This mandate should be formal and should be reaffirmed as often as necessary during the automation project

Commitment

Committees need the most capable and energetic staff the court can spare from their regular duties If knowledgeable skilled and experienced staff do not participate in analysis and design work the new system may fall well short of expectations

Delegation of Authority

Automation projects consume resources money, people s time space and equipment They affect the court significantly at almost every level Needless delay and diminished quality will result if project leadership lacks the ability to muster needed resources or make decisions for the organization

Consensus

Project leadership also must build and maintain consensus in the organization If the court disagrees about the nature of the problem the approach that should be taken or the ultimate solution motivating staff to cooperate participate and assist will be difficult

Support

Successfully implementing automation requires support at all levels of the organization Key individuals (organizational assassins) can impede progress and sow seeds of dissension Project leaders need to spend time communicating with staff listening to their ideas addressing their concerns and involving them in design and decision making

Planning

Data processing is an architectural science The construction of buildings does not begin until designs are on paper Similarly planning for court automation is the process of developing blueprints It is deciding what to do in advance when it should be done, who will do it and how much to spend

Formal planning documents should precede each major step in the systems development life cycle The court policy group overseeing the project should approve these plans

The plan should begin with a statement of the project goals and objectives Each objective should then be broken down into its component parts until each task is so specific that its duration and cost will be easy to estimate A Work Breakdown Structure, is a detailed organized list of the tasks in a project

It is important to specify major action and decision points in the planning process These points are called milestones Documents containing the results of various tasks called deliverables also should be defined Deliverables should be reviewed modified and accepted or rejected by the policy group

The plan also should define a process for monitoring progress As part of the planning process periodic meetings to review project progress should be scheduled

Sound planning is essential to attaining project goals It reduces uncertainty lessens stress and promotes good relations between court staff and the project team all of which are part of the blueprint for success

Decision Making

Why is decision making important? Poor decisions at critical points can be catastrophic and lead to omplete failure At other points poor decisions can waste time and money and result in lower uality systems

What kinds of decisions must be made in a court automation project? Court managers must agree n the nature of the problem faced which solution will be used to address it the priority of tasks nd projects the acquisition and allocation of resources to address problems and accomplish court oals and the resolution of conflicting objectives project plans budgets and staffing In addition ecisions must be made about what data elements to include in a system how to place them on creens what edits to apply to ensure invalid data are not accepted into a database what nformation processing will be performed and so forth

A three tiered structure consisting of a policy committee user groups and ad hoc committees is ecommended for decision making in court automation projects

The Policy Committee

he maxim if you don t know where you re going you may not get there is nowhere more pplicable than to automation projects The policy committee (or advisory or steering committee) akes the policy level decisions it is responsible for managing of the project Project management ncludes acquiring resources setting and prioritizing objectives allocating resources to maximize tainment of the objectives planning budgeting staffing and approving major hardware and oftware contracts

The User Group

he user group is responsible for working level decisions Its members determine which nhancements or functions are desired in a new system and set priorities They approve system signs and participate in acceptance testing of new systems or modules

ser group members should include working level personnel and mid level managers who work ith the problems that contributed to the need for the project

The Ad Hoc Committee

d hoc committees should be formed as needed to address specific design issues that affect a nique group of court employees and to test modules completed by the programming staff

Who should serve on project committees and how should they be selected?

rst individuals in the court who have emerged as local experts should be identified These key rsonnel are needed because of their special skills and ability to understand and learn new things They e the informal leaders of the organization Also a few of the cynics in the organization should be osen They should not form a majority of the group nor should they serve as leaders Their inclusion ovides several benefits They will bring alternate views that may help the group make better cisions Because of their participation in the decision making process they become partially sponsible for the outcome and are less likely to resist the new system

olicy Committee? _____
ser Group? _____
ourt personnel (leaders experts cynics)?

Managing Projects

Project management is built upon sound planning In planning the project manager decides what needs to happen in project management the project leader makes sure it gets done as planned Completing tasks staying on schedule and within budget and solving the problems that invariably occur are all parts of this process

Managing Change

Changing the way courts do business has always been a challenge

Technology changes rapidly but people do not despite strong pressure to do so Many court and technical managers responsible for implementing a technical innovation focus solely on the merits of the technology They believe that an innovation s technical superiority and importance will guarantee acceptance Yet the human factor is often the key to implementing change in the courts

The first step is to recognize the need for the change Many court staff may accept the need on an intellectual level but may not adjust emotionally The second step is to formulate and share the vision of how the court will work after the change including a view of the change process (the technical challenges political constraints and cultural conflicts) The third step is to institutionalize the change through a commitment to educating court staff a willingness to confront the issues and individuals that stand in the way a realignment of resources to support the changed organization and a measurement of the results of the process

Resistance exists for many reasons One reason is the feeling of uncertainty because technology often promises more than it can deliver Because they can only speculate about the real benefits of the change versus the negative effects people often tend to prefer a known system of lesser quality to an unknown system with promised higher quality People are often attached to things as they are whether good or bad They may see a potential loss of status control power or comfort Change can threaten their competence create new rules and regulations and alter relationships in the organization

Resistance is best overcome by involving users in decision making by building rewards into the process by confronting problems and by building organizational consensus Education and socialization play important roles

Communication at all levels must occur A marketing plan can effectively sell the idea if proper communication outlets are tapped A few people can make a project fail a few cannot make it succeed While it may not be possible to convince everyone most of the staff must accept the change for it to be successfully implemented

Once the change is put in place it is important to monitor how staff are adapting By reviewing processes and procedures periodically managers can ensure that the change is institutionalized by the organization

Managing Expectations

Unrealistic expectations can convince anyone that a successful project has failed or discourage court staff to the point that the project may never be completed Overselling an innovation is an invitation to failure Proper management of expectations is another important issue that should be addressed by project leadership

Recognition of Need

Formal recognition by court leaders of the need for and benefits of automation is the threshold event to begin a project Recognition of the need for the project results from court leaders observations user complaints or user initiatives to improve the existing manual or automated system

Court managers decide to undertake an automation project to relieve court problems

MOJ Problem Definition

1 An activity to Identify the high level functions of the court describing *what* types of work are done
2 After you have listed what functions you do in a court you will be guided to Identify the problem functions and describe why
3 Next you will describe the activities of the problem functions (what activities are performed for each function) and identify which of those activities are the problem activities and why?
4 In order to measure eventual success in solving the problems you will Identify problem indicators and current measurements

MOJ Problem Definition

1 An activity to Identify the high level functions of the court describing *what* types of work are done

Function — Functions are what is done to support the goal of an organization The goal of courts is to settle disputes of law The functions of courts are all those things which you do in planning work acquiring the resources to do the work, doing the work and evaluating what was done to accomplish the goal Functions are work that is ongoing and continuous, not necessarily based on organizational structure, describes what is done not how, and are best described in "gerund phrases" That is a noun followed by a gerund (a verb acting as a noun and usually ending in ing ment or tion) Examples are (Personnel management Service processing etc)

NOTES

MOJ Problem Definition

2 After you have listed what functions you do in a court you will be guided to a) identify the problem functions b)Prioritize the problems

Problems Problems establish the need for solutions (i e with no problem or opportunity what are we fixing?) Defining the problem assists in justifying the project and efforts involved

NOTES

MOJ Problem Definition

- Next you will describe the activities of the "problem functions (what activities are performed for each function) and identify which of those activities are the "problem activities and why?

Activities — Activities are units of work which follow the same pattern as functions except at a lower level of detail Activities again describe what is done, not how Activities are best described in "verb noun" form (ex Schedule hearings, report statistics microfilm documents etc)

NOTES

MOJ Problem Definition

4 In order to measure eventual success in solving the problems you will identify problem indicators and current measurements

Indicators Reports statistics or any other measurement of level of effort to do work or amount of work accomplished in an activity or function Indicators should be quantifiable so that measurements can be compared over time to monitor progress

NOTES

Typical Court Problems

Court problems include

Redundant Data Entry

The need to copy (enter) and recopy (reenter) names addresses and charges for folders dockets notices etc as the case moves from department to department and from one case processing activity to another plagues court staff when a court is over loaded The cycle employs inefficient time consuming error prone sequential procedures

Lack of Data

Administrators must make critical management decisions with little data on how the court s overall case processing functions are working

Overextended Staff

The volume of work strains clerical and other support staff trying to answer an ever increasing number of inquiries perform more records checks track the location of files and documents and prepare meaningful calendars

Reporting System Breakdowns

When workload exceeds available staff resources daily case related work generally has priority over reporting duties Reports are late incomplete or inaccurate

Fragmentation of Court Organization

As a court gets bigger organizational and administrative changes can occur haphazardly

External Demands Outstrip Data Availability

The legislature supreme court other funding bodies and the public have an increasing appetite for court data Many courts are simply unable to meet these demands Pressure is exerted on judges and administrators to find answers to questions for which no information is available

Caseflow Management Problems Increase

Uneven assignment of cases leads to disparate work loads and crisis caseflow management Cases are not managed by their complexity or by individual needs and many sit idle for months or years Public dissatisfaction with the slower pace of litigation grows and advocates manipulation of the system increases

Goals and Objectives

Project goals should be specific realistic clearly articulated and broadly communicated to court personnel and court users Examples of project goals that are cited frequently but are too general to be useful include provision of mandated services improved court operations improved public service reduced cost of court operations generation and collection of additional revenue increased public access and future budget stability To ensure that project goals are specific court leaders should first define the project in broad terms In successive review they should narrow the focus until each objective of the project is measurable and specifies the level of measurement required to consider the project a success Goals and objectives should be attainable to keep project staff and user enthusiasm high Goals and objectives are what you measure success by Below are examples of specific measurable and attainable project goals

Figure 15 Project Goals

Besides establishing policy and operational goals court leaders should define technical goals Technical goals for any automation system cover maintainability integration security reliability portability and simplicity

MOJ Objectives Definition

1 You will describe your objectives for automation and streamlining of the pilot courts and prioritize those objectives

Objective An objective is a desired position reached or purpose achieved by some activity within a specified time period Effort is directed towards attaining each objective Objectives define where the organization is going To be useful objectives must be (SMART) Specific Measurable, Attainable, Relevant and Time based (ex To capture 57% of the new car sales market based on units sold within the next 5 years)

NOTES

In Depth Analysis

After defining the project scope goals and objectives the project staff takes the next step to document the current system The definition of system needs should include a description of the existing system and a discussion of functional requirements

Describing the Existing Work Environment
Determining System Functional Requirements

The evaluation should address the issue Is the court ready for automation? The question can be answered affirmatively if the steps in the systems development life cycle and elements described as management strategies have been addressed as well as other related issues If the court is well managed if consistent documented procedures are in place if no apparent problems exist with workflow or personnel the probability of a successful project will be much higher Any procedural problems in how the court completes its work must be resolved before an automated system is implemented A computer system will magnify not remedy poor procedures or management

Describing the Existing Work Environment

The project team should create a flowchart that shows the existing process and describes in detail what is done and how it is accomplished The flowchart will give the court a clear concise description of its operational procedures Flowcharts pinpoint particular problem areas and communicate potential resolutions

Special rules of the system also need to be documented to help guide the development effort e g notice hearings will be scheduled every Monday except for the fourth Monday of every month

Analyzing the Current Manual System

Whether the court is planning its first system or intends to improve or replace existing hardware and software its automated system should not simply mirror current procedures Automation can consolidate or eliminate tasks change recordkeeping practices and make information available that was too difficult to collect manually It also can enlarge preexisting problems in paper flow or work flow Courts should fix problems in the manual system before installing automation

The project team s first step in a requirements study is to gain an understanding of current operations by documenting each process from beginning to end To automate successfully the court must capture each step in the process By omitting an important procedure a separate manual process may be maintained at great cost to the court

Processes may be complex with many branches In manual operations (as in automated environments) people make decisions about how information will be processed based on rules policies operational practices and precedents legal considerations and traditions (That s the way it s always been done) All paths and alternate processing routes must be traced to learn what rules or logic are applied in each situation Documenting only the main path will lead to an impractical or incomplete solution Decision makers may choose not to automate every step but to decide wisely the entire process must be documented clearly

As each process is documented the following information should be obtained

the people who perform each major task

the type of data created and used in each process and other processes that depend on it

the records created and maintained and their useful life span

legal requirements

the volume of work (for example number of cases filed number of register of actions entries number of juror summonses produced number of hearings scheduled etc) and

where they get information and where they send it

While documenting the current processes the project team should look for tasks that could be consolidated eliminated or streamlined Analysts should ask how and why these tasks are performed

Once the project team knows who creates updates and uses the information its volume and useful life span legal parameters etc it can identify the functions best suited to automation

Selecting Processes for Automation

The project team should evaluate the processes to determine which of them

result in repetitive steps

generate or use the same information as other processes (e g , case identification information attorney data)

involve retrieval of basic information (e g , answering inquiries about next week s calendar)

require an audit trail or other strict control over the quality of information (e g cashiering warrants)

require multiple or complex calculations (e g accounting or statistics)

remind people of a due date or an action to be taken (e g , issuing a warrant if a traffic fine is unpaid by a certain date removing disposed case files from active case file storage),

require the case file to be retrieved,

require staff to rewrite information from one type of record to another (e g , preparing the weekly calendar)

generate confidential information

involve exchange of information between the court and other justice agencies (e g , calendars warrants releases) and

generate data for management or statistical reporting

The project team also must consider the number of people involved in each process the volume of work or records created and the relationship of various processes to each other

Determining the Functional Requirements of the System

A requirements analysis should serve three main purposes (1) to define and communicate the scope and nature of the proposed system to others within the organization and outside (if automation will have an effect on their operations) (2) to communicate (through an RFP or other method) the functional requirements to vendors who can supply software or to systems designers if the plan is to build or modify a preexisting system using in house staff and (3) to provide a benchmark against which software may be evaluated and selected if the decision is made to procure a new package These purposes should guide the team s activities and shape the final product

Major Systems Modules

The building blocks of the system are modules composed of interrelated functions They are defined for the sake of understanding and convenience i e to link to a recognizable group of functions Case initiation case maintenance calendaring and other function groupings may be modules of an automated case processing system

Functional Requirements for Each Module

Functional requirements describe software capabilities that support the performance of the specific functions for each module When describing functional requirements the project team must project what the tasks will be in an environment where the computer supports and in some cases replaces manual procedures and paper records Information previously recorded on paper will be input to the computer where it will be stored sorted and viewed Some current activities may disappear or be replaced by a combination of computer and noncomputer processes Functional requirements should describe how users will interact with the system and how automation may change various aspects of the work The analyst should anticipate and answer users questions How will this help me? and How will it change what I do?

Relationships of Tasks

In a manual system separate information collection is often done to support different functions even if the information overlaps For example defendant and plaintiff indexes are maintained separately from the case dockets even though the dockets may contain all the information needed for both Scheduling events and maintaining the case docket are similarly related in many courts

Redundant record keeping is usually a first sign of a data relationship The project team should look for processes that can be combined or eliminated and the effect this change may have on the organization and current processing routines

Major Systems Products

Before determining what constitutes computer input the major outputs must be defined This aspect of requirements analysis needs more attention than it usually receives All existing forms notices form letters calendars management and statistical reports and other records should be cataloged In many cases automation provides an excellent opportunity to review and consolidate redundant records and forms The need for new outputs also should be considered New initiatives by the court such as the adoption of time standards or new case processing procedures may require other information and reports never before anticipated

Data Requirements

The data required for most court applications are extensive Every data element eventually will be defined precisely and cataloged in a data element dictionary

A preliminary data element dictionary can be compiled from current reports forms notices calendars and other records that have been cataloged The project team should watch for synonyms data items with different names but the same meaning and usage Synonyms are common in manual information systems where there is no central control over how different people refer to data elements The reverse also may occur a data item may be called by one name but defined differently by various people As the project team begins compiling the data element dictionary it should provide definitions and note where the information is used

Security Requirements

Security measures should protect the court s data from three major sources of harm intentional misuse or destruction inadvertent user errors and loss due to computer failure

Requirements Report

The work product of the requirements analysis should be the requirements report Although there are as many formats for a requirements report as there are analysts the preferred format is an annotated checklist Such a document succinctly states each separate requirement in a phrase amplified by a short descriptive paragraph Data requirements may be described under each processing task or may be compiled in a data element dictionary Descriptions or samples of reports and o her printed outputs can be compiled in an appendix

Evaluating Solution Options

The requirements report should describe the desired system by the functions it must perform and the data it must maintain It is the benchmark against which various alternatives are measured Now it is appropriate to consider the available options for acquiring those needed functions

MOJ Other Options Definition

1 You will identify any other initiatives projects or plans in progress or anticipated which you are aware of which concern our objectives

NOTES

Software Development Options

Acquiring a New System
Custom Development

Acquiring a New System

New systems can be acquired from a number of vendors that specialize in court software Even though these packages may require a number of modifications to meet the specific needs of the court this alternative can result in a faster implementation and lower costs

If systems are not specifically developed for a court they likely will require a some adaptation Subtle differences in case processing can make some automation approaches impractical Obtaining information about vendors and their products can be done through formal or informal means such as the following

Request for Information

A formal document issued to vendors to obtain information about the available products (including product descriptions cost and technical requirements) and firms (size client base geographical area of operations history and services offered) Responses to an RFI are not usually considered bids but are used for informational purposes

Software Demonstrations

Demonstrations may be arranged through the vendor or in some cases another court may be willing to host a visit The Court Technology Laboratory of the National Center for State Courts may provide the best facility for objective comparison of multiple software products in a noncommercial setting

Vendor Literature

Many vendors have extensive literature describing the features and functions of their software Some vendors can even provide demonstration disks It is usually best not to view these materials prior to needs definition to avoid impulse buying and being distracted from your objectives by sales promotions of the vendor s product strengths

Custom Development

Obtaining the information required to compare this alternative to others is a difficult step The cost and time estimates for custom development are usually optimistic at best, particularly if the development team is unfamiliar with court applications Putting together an accurate cost and time estimate requires considerable investment on the part of a software developer To make an accurate projection a developer needs a great deal of information just as a building contractor needs to see the architect s plans before making an estimate Software developers do not wish to be held to any estimates based on inadequate information

If the court wants to make an informal time and cost estimate of consultant costs assigned analysts can contact other courts that have developed similar applications to determine the number of hours billed by the contractor for (1) analysis and design (2) programming testing, debugging and installation (3) data conversion (if there is an existing application) (4) documentation and (5) training Some developers have a standard rate for all services but many contractors charge different hourly rates for different types of activity Analysis and design are likely to be more expensive per hour than programming

Hardware Technology Options

One of the most common questions asked by nontechnical court staff in the early stages of an automation project is What kind of computer should we buy a mainframe minicomputer or PC? Although consideration of hardware alternatives generally should be deferred until after many other decisions have been made hardware options eventually must be explored The differences in size power and performance of computing platforms are important in selecting the most appropriate tool for the court

Mainframes are large computers that have been used widely for about 30 years They are genera multi million dollar systems with dedicated facilities and staff They require special environments (air conditioning humidity control electrical power) They can support hundreds of users and do ns of applications

Minicomputers/Midrange computers which appeared in the early 1970s are easier to use and m ch less expensive Smaller minicomputers can be placed beside a desk in an office larger ones are p ed in computer rooms much like those used for mainframes The power speed storage capac and cost of minicomputers are typically lower than a mainframe system

A Mainframe
B Midrange (central or distributed)
1 single application & data base
2 dumb terminals
3 no desktop applications
4 less fragile
5 fewer products available
6 less growth potential for image and document interchange

Microcomputers specifically personal computers are single user machines much smaller than a minicomputer They were introduced a little over ten years ago They can be networked together with similar machines and with servers microcomputers dedicated to providing printing data storage fax or other related services

A Client Server
1 PC based
2 multiple operating systems
3 single database at server applications at clients
4 more fragile
5 more versatile (desktop applications)
6 will require on site system technician

The power speed data storage and communications capabilities of all three of these computer platforms have grown rapidly and will continue to grow for years to come This rapid evolution makes long term investment in expensive equipment quite risky

Acquisition

Acquisition Goals

The goals of the acquisition strategy are to minimize the risk of computer system failure and to obtain a predetermined and acceptable level of quality for computer services at the lowest possible price

There are several procedures that courts can use to ensure that the computer services selection process is fair to the vendors Foremost among them is to establish realistic, workable objectives not only for the system but also for the procurement Early discussions must be held to identify the court s specific automation needs Other discussions must be held to identify other important issues such as the effect the system will have on noncourt participants who interact with the judiciary the amount of money available to fund the acquisition and implementation time frames

These early discussions should focus on establishing appropriate acquisition milestones and deadlines to be observed during the procurement process The milestones and deadlines include the time frame for initial vendor contact the due dates for the requirements analysis and the RFP, the deadline for receipt of the vendors responses and the time frame for adequate follow up on any system alternatives described in proposal responses

Establishing reasonable time frames is an important part of playing fair with vendors It is hardly fair for example for a court to spend nine months to one year articulating system objectives and defining precise system needs and then allow vendors only one month to provide a detailed response to its requirements Establishing unfair response time frames also is harmful to any court that wishes to determine the best system solution because it limits the quality of some vendors responses and discourages others from responding at all It is also unfair for courts to develop huge, multivolume encyclopedic RFPs that force vendors to digest and respond to great amounts of largely irrelevant detail

Competitive Methods for Acquiring Technology Products and Services

There is no best competitive procedure for procuring all categories of computer equipment and software because every procurement differs The request for proposal (RFP) the request for information (RFI) and the request for bid (RFB) present the court with the most procurement options

Request for Proposal (RFP)

An RFP is among the best methods for enhancing negotiating leverage with computer vendors Although the RFP purchase mechanism is time consuming an RFP s many advantages outweigh any disadvantages and delays caused by its preparation An RFP

Informs vendors that an official contract is pending and encourages them to make their best effort More rapid and responsible vendor responses result

Requires the court to specify what it proposes to purchase If the requirements analysis has been prepared rigorously it can be incorporated quite easily into the RFP

Alerts vendors that the selection process is competitive The vendors will be solicitous of the court s needs and positions regarding legal issues and system requirements

Forces vendors to respond factually to the identified requirements Vendors know that if selected they are contractually bound by their previous representations (It is not uncommon for a vendor to hedge about capabilities of hardware during the contract negotiation The hedging can be eliminated quickly and effectively when the vendor is reminded about previous representations in the RFP response)

RFP Administrative Requirements
Oral Presentations
Vendor Conference
Selection Procedure
Procurement Timetable
Proposal Format
Prime Contractor
Mandatory Versus Desirable Requirements
Contract Integration
Evaluation of Responses
Disqualification
Rejection of Proposals
Debriefing
Appeal Process
Ownership of Response Information
Use of Proposals
Disclosure of Proposal Contents
Return of Proposals and Cost of Response
Duration of Contract

RFP Business Requirements
Delivery and Installation
Delivery
Site Preparation
Training
Vendor Support Personnel
Financial Strength
References
Documentation
System Maintenance
Acceptance Testing
Payments
Project Management

System Design And Development

Software Design and Development Process

The following discussion relates to original and enhancement software development

Major and minor changes

There are three types of enhancements that can be made to a computer system remedial perfective and adaptive Remedial changes correct flaws in system performance Perfective enhancements improve the quality or efficiency with which the computer does its work Adaptive changes help the court respond to a changing environment such as new laws passed by a legislature

Approval and priority setting

Changes go through a complex process First they are reviewed by an analyst to determine which programs must be written or changed which files will be created or modified how long the changes will take to complete and the overall cost A list of pending changes is created A priority is assigned on each item

Once the user group approves a list of changes it is sent to the policy committee The policy committee balances the priorities of the various groups and ensures that each receives a share of technical resources It also guarantees that the most critical problems are addressed in a timely manner

Assignment to software release

Once a package of changes is approved by the policy committee, it is assigned to a software release A typical court s software system consists of roughly 750 programs the printed listings for each system (printed in very small type) fills a six foot bookcase! It is easy to see how quickly things could become confused with ten or fifteen programmers and analysts modifying hundreds of programs almost continually

Design

Changes are designed by the analyst, who reviews the programs and files to be modified and prepares a set of specifications An ad hoc committee of users may be formed to work on significant changes to the system

Programming

A programmer makes the necessary changes in programs and data files used in the copy of the software designated for that software release

Testing

The changes are tested at several levels by the programmer, the programmer manager and the analyst that did the design work When all of the changes in the release are complete, the version of the software is given to the trainers, who test it further and develop documentation They bring users into the training facility for a final test of the software and documentation

At any stage in the testing process the software can be sent back to the analyst or programmer to correct or improve any feature New programs may go through this cycle six or eight times before they are ready for release

Documentation

Documentation is needed at several levels First the reference manuals for the software package must be corrected to reflect the changes Existing training courses must be updated to include the new material Special training programs often must be developed to accompany the new release so experienced users can be made familiar with new procedures

Beta test

After the training staff is satisfied with the performance of the release, it is installed at one court location for beta testing Often this live test uncovers additional problems with the software In this case the programs would go back for further work until the beta test site is satisfied with the product

General release

After a period of several weeks of succe ful beta test operation the process of installation of the new system at all court sites begins

Court leaders often express frustration at the length of time needed to modify/create case management system software They point to leading software suppliers and the speed at which they seem to be able to produce new versions of their systems What they don t understand is the amount of resources these companies have to devote to new products The upgrade from WordPerfect version 5 0 to version 5 1 required over fifty person years to complete!

Core Functions of Case Management Applications

Let s take a careful look at case management in the court environment Automation can be defined as replacing human effort with machine effort In what ways does a court case management system replace human effort with machine effort? Is it possible to be computerized not automated?

After a couple of decades of experience with case management systems courts are able to define more clearly the role the computer should play in the clerk s office The following is a list of the typical automation functions performed in a trial court While most systems perform these core functions some create more human effort in data entry and other tasks than they eliminate Some are much more effective and efficient than others The key is not in determining what functions the system should perform but in deciding how best to design and implement the system to eliminate human effort in these tasks

1 Docketing (register of actions)
One of the fundamental roles of a case management system is to maintain a record of papers filed court events decisions and orders in cases This was the function performed historically by the docket book the judgement docket and other paper records An electronic docket can provide faster access to the history of a case than any other method It also can provide access to this data from remote locations eliminating proximity to paper records as a requirement for access to information

2 Indexing (cross reference)
Even in small courts that process few cases indexing is a key function Indexing allows case files typically stored in case number order to be retrieved using other data If a person knows the name of a party in the case or other information but not the court case number an indexing system allows staff to identify and retrieve the proper records

3 Assignment
One of the early purposes of modern judicial administration was to eliminate judge shopping by lawyers trying to ensure a successful outcome in their case Computer systems now provide random and balanced case assignment systems that eliminate judge shopping

4 Scheduling
In a calendaring system the computer is used to keep track of the schedule of court events in cases

5 Caseload management
As courts have struggled with growing caseloads, management of the process has become more and more important Traditional tools of the court administrator, caseload, caseflow and workload statistics would be difficult or impossible to obtain without the computer This statistical information combined with an exception reporting system that identifies cases that are outside the standards established by the court can help the judicial branch better manage its business and avoid embarrassing mistakes

Caseload information includes data on cases filed and terminated in various categories such as by case type by judge and by termination type Caseflow information examines the pace at which cases move through the system Examples of caseflow data include age of pending cases (by type, judge etc) and age of cases at disposition Workload information is the raw count of activity orders to show cause trials arraignments and so forth

6 Inquiry
One of the goals of a good computer system is to contain sufficient data to answer basic questions about the case without retrieving the file This allows staff to get the information they need through the computer without taking a lot of time to locate and review the file Not only does this save time for people it helps reduce the number of lost files and helps preserve the condition of the papers filed in the case

This desire to reduce file access must of course, be balanced against the cost of collecting and entering the information into the computer system As a general rule, information must be needed for more than one purpose or it should not be put into the case management system

7 Document generation
A feature of the court case management system that involves a great deal of creativity and imagination is document generation Well designed documents created by the computer can eliminate human effort in the clerk s office

8 Financial management
A key function of court automation is financial management

9 Tickler system
A tickler system can remind judges and court staff that something should be completed by a certain day If it does not happen a message appears on a tickler screen or list reminding the user to determine why the action did not take place as it should have They are one of the simplest and most useful components of a case management system

10 Statistical reporting (aggregate data)
Performance of individuals and programs can be assessed with statistical tools

Sample Court Software

I GENERAL ADMINISTRATION
- A written communications generation
- B personal calendaring/scheduling
- C intra office communications and noticing

II PROCUREMENT/INVENTORY MANAGEMENT
III PERSONNEL MANAGEMENT
IV LEGAL RESEARCHING
V CASE FOLDER MANAGEMENT
VI FINANCIAL MANAGEMENT
VII CIVIL CASE PROCESSING (COMMERCIAL)
VIII SERVICE OF PAPERS MANAGEMENT
IX FACILITIES MANAGEMENT

Case Folder Management

Purpose

make it more convenient to determine the physical location of a file folder and the person to whom it has been signed out
provide better central control over the movement and location of files
ensure that only authorized persons have access to confidential files
provide workload reports for management
provide assistance in locating files for research and missing files
replace the manual card indexes with on line inquiry capabilities

Functions

create and update a database of all physical case files
identify multiple volumes of a case (thick files)
flag expunged sealed and confidential files
create update and delete case file records
check out file folders to a requester
create update and delete a record of authorized file holders
check in returned file folders
track all files checked out
produce workload reports
archive function
maintain an index of the electronic tapes used to record the proceedings of the court

Civil And Commercial Case Processing

Supports case processing from initial case filing through execution of judgment
Provides management information and statistics

Purpose

open cases filed with the court
allow entry inquiry and update of case information
record documents
schedule notice and monitor the events necessary for case processing and disposition
prepare calendars of scheduled events
record the disposition of cases
produce statistical reports

Description of functions

A CASE INITIATION
- a) create update and display a record of each civil case filed with the court
- b) assign a system generated sequential case number by case type
- c) assign cases to specific judges or sections of the court at filing

d) create update and display party/attorney information
e) create update and display attorney register
f) identify the nature of the action
g) identify an abbreviated case caption
h) interface with the financial subsystem
i) including filing fees court costs bonds and miscellaneous revenues

2 identify consolidated bifurcated and related cases
3 capture bond information (cash and non cash)

B CASE INDEXING
1 display on line indexes
2 distinguish between public and confidential cases
3 provide multiple name search capabilities
4 produce printed/microfiche indexes
5 provide direct access to case information through index

C REGISTER OF ACTIONS
1 create docket entries by the use of code tables
2 create update display and print table of docket codes
3 provide the option to add explanatory text to a register of actions entry
4 date each docket entry
5 identify the originator of each docket entry
6 print the docket
7 display the docket

D CASE SCHEDULING AND CALENDAR MANAGEMENT
1 create and maintain civil calendar structure
2 provide scheduling for future hearing and trial dates
3 provide scheduling assistance
4 reschedule/cancel a hearing on the calendar
5 print/display calendars
6 maintain a tickler system" for individual cases

E WARRANT MAINTENANCE
1 capture warrant and summons information

F NOTICE GENERATION
1 generate notices

G JUDGMENT AND DISPOSITION MAINTENANCE
1 record partial judgments/party dispositions
2 record the entry of judgment

H STATISTICS AND REPORTS MANAGEMENT
1 provide caseload inventory statistics and reports
2 provide caseload management statistics and reports
3 provide caseflow management statistics and reports

I CASE NOTES RECORDING

Service Tracking System

Much of the information needed to establish the record of a paper for service is generated by the clerks office when a case is initiated or when a warrant or summons is issued for service This data will be used to initialize service records

Actual service may be performed by a separate agency which would maintain service information

Purpose

maintain logs of all civil papers for service
track the current status of each paper
track the assigned papers and workload of each server
produce various on screen and printed outputs including listings of papers and statistical and
printed outputs including listings of papers and statistical and management reports

Description of functions

A RECORD INITIATION
1 initiate a record of each paper assigned to the division for service
2 produce a printed transmittal listing

B REGISTER OF ACTIONS
1 update the service of papers database
2 track reassignment of papers
3 create and update code tables
4 ON SCREEN INQUIRIES/PRINTED REPORTS
5 produce monthly activity report
6 produce individual server monthly return report
7 produce division's monthly returns report
8 statistical reports
a) days for service
b) performance indicators
c) unserved papers
d) papers returned unserved

Financial Management

Includes

better control the tracking of cash flows into the court
provide court management with revenue reports in a timely fashion
distribute cash intake to multiple accounts
facilitate the balancing of cash drawers
provide receipts to persons making payments to the court
provide input for the courts financial reports
process cash receipt transactions originating from point of sale personal computers
process over payment and under payment transactions
handle overrings voids overages and shortages
generate a hard copy receipt for any cash receipt transaction into the system
generate daily cash reports

Implementation And Operation

Implementation

A sound implementation plan is essential to the success of every technology project Development of an implementation plan should begin conceptually when project goals and objectives are established As the requirements analysis and request for proposal or system design are finished details of the plan should be committed to paper The final plan should be completed and approved at least six months before the desired implementation date Several groups of issues need to be addressed in the implementation plan facilities training start up activities operation of the system and policies and procedures

New computers peripheral devices (workstations printers scanners) and technical staff require space Except in new buildings this requirement means reorganizing people materials and work flow The first step in the facilities portion of implementation planning is to identify where everything will go Next a thorough review of the building must be completed to learn what changes must be made to accommodate the new system Then the actual preparations and modifications are undertaken and completed Finally installation of the hardware is scheduled

The implementation plan also should address training needs Technical staff may need training for new hardware system software development tools and court operations Users may require training in systems administration office automation packages and the new court case management application The plan should indicate what training will be offered who will attend on which days at which locations Post implementation training also should be provided

The system start up should address the conversion of data from the existing manual *or automated* format to the new system specifications If all or part of the conversion will be performed manually the plan should specify how cases and activities will be handled in the court on the first day of live operation and thereafter For example will only cases filed on or after the implementation date be entered into the new system or will all court activity from the implementation date forward be included?

The plan should outline responsibility for new tasks and procedures that accompany the implementation Typical questions might be Who will print the new warrant forms each day? or Who is going to perform the nightly system back ups? or How will problems with the system be communicated to technical staff and how will they be resolved?"

Policies and Procedures

A process for creating modifying approving and disseminating policies and procedures should be established

Facility Preparation

Heating, Ventilation, and Air Conditioning

Building heat ventilation and air conditioning (HVAC) systems should provide a draft free office with a stable temperature and humidity Computer equipment usually requires a controlled and consistent environment Excessive heat or cold can damage hardware, insufficient humidity can cause static electricity and disrupt operations

Electrical

Almost every piece of computer equipment needs electrical power Most can be plugged into a standard 15 ampere wall outlet Inexpensive surge protectors can be added to protect a court s investment in PCs and other equipment but larger devices need more sophisticated protection Power conditioners stabilize the flow of electricity but are usually not a guarantee of protection against lightning strikes and outages

Uninterruptable power supplies (UPS) provide the power conditioning previously mentioned and add protection against a complete loss of electricity They normally provide power for only a few minutes

long enough for an operator to bring the system down in an orderly manner Most power failures are very brief so a UPS is a good investment for a computer that stores court information whether it be a PC, minicomputer or mainframe

Cabling

Cabling connects the computer with its peripheral devices, e g work stations printers scanners modems disk drives There are two important issues related to cabling what kind of cable to use and how to run it from the computer to its peripheral devices

Stringing cable in older buildings or between buildings can be quite a challenge Some facilities were not designed to accommodate this type of cabling, and installation can add a great deal of expense to a project It is important that the project manager not underestimate the time and expense that may be necessary Cost and time estimates for peripheral cabling should be one of the first priorities of the facility preparation process

Telephone and Telecommunications

Communication with a computer at a remote location requires a telephone line Attachment of workstations or printers in remote locations also can be established through the telephone network Telephone lines will be required in nearly every major automation project

Furniture

There are many negative consequences of prolonged computer use particularly in situations of inadequate posture or lighting but back neck and eye strain are among the most common Carpal tunnel syndrome a degeneration of tissues in the wrists and hands is one of many more serious ailments that can result The court should purchase furniture and design work areas to prevent these conditions

Technical staff may need special furniture Tape and disk storage cabinets printer stands with acoustic covers and other equipment should be considered as needed

Lighting

Adequate lighting must be provided in all work areas including computer rooms, if employees are to complete their work In the office environment, glare from computer screens can be a problem

Installation

Once facility preparations are complete and equipment and supplies have been delivered, installation follows

As a part of the computer installation system software (the operating system file system database package communications programs programmer utilities) will need to be installed As at other stages of the process any number of things can go wrong so the system should be tested as thoroughly as possible

Once all the hardware and software are functioning properly, the case management system should be loaded and tested All features and functions should be checked by entering sample data and any special codes (such as judges, law enforcement agencies charges) should be added to user-accessible code tables Staff training can then commence By installing a test version of the application staff can practice the things they have learned Because it may take weeks to train the entire court staff some individuals might forget what they learned unless they are able to practice during the period between training and system start up

Training

The best system ever created could be useless to a court if the people using it were not doing their jobs correctly Millions of dollars can be spent on hardware and software yet the ultimate success of the system depends on the quality of work of the individuals with the lowest salaries and the least training in the judicial branch Good training and quality control procedures are perhaps the most important

challenges project leaders will face If training is not effective the automation process cannot be successful

This training component must be a permanent part of the court In large court systems full time staff should be assigned to the task Smaller courts must ensure that someone is given the responsibility to assure that information entering the computer is accurate Regular audits of data input should be performed to identify problems and training needs

Those staff with operational responsibilities need beginning intermediate and advanced training to support the system including security backups and troubleshooting Supervisors need beginning intermediate and advanced training in the software applications They should be the resident experts in all phases of system operation and should help identify and resolve problems Line staff need beginning intermediate and advanced training in the modules of the software application they will use daily

Most systems require constant upgrades As programs are improved and features are added training programs and instruction manuals need to be updated Project leaders should develop a process for keeping these courses and materials current

Documentation for the system reduces the need for staff to remember the details learned in class If they know answers are available and where to look for them they feel more comfortable with the system more quickly Three types of materials need to be provided application reference materials training guides and system information

Application reference materials are the instructions for using the court case management information system They should be detailed easy to read filled with illustrations and well indexed

Training guides are materials used in training They contain more illustrations exercises and samples than reference materials and are structured to fit the flow of the training classes They are written at a much more basic level and need not be comprehensive recitations of system features and functions

System information is the collection of handbooks and reference materials provided by the vendor for all the hardware and system software For example court employees that do system backups will need operations manuals to assist them in troubleshooting when problems arise Those responsible for laser printers need the instruction manuals for periodic cleaning changing toner cartridges etc

Start-up

There are several steps that precede actual operation on the new system Copies of the programs may need to be reinstalled if modifications have occurred during testing and training Data files should be cleared if users have been entering practice cases

The start up plan will show how court employees are to deal with the first few days of operation There are several approaches that can be taken

One approach is to enter only new cases filed on or after the implementation date This eases the pressure on court staff in the first few days and gives them a smooth gradual transition period On the other hand keeping track of where information is stored can be difficult and the cost of maintaining two systems can be prohibitive (Can most desks hold two workstations?) Another drawback is that neither system will have complete and accurate information It could take years to cycle the old cases out and courts cannot go without data for that long

A second approach is to start using the new system for all cases filed or pending on or after the implementation date This approach gets the new system up and working most quickly and allows the court to take advantage of more of its capabilities sooner The major drawback is that a tremendous amount of data must be entered in a very short period

Another important issue is parallel testing Most textbooks mention the need to run the new system with the old to make sure everything works correctly While a good concept, this practice can be followed to

only a limited extent in most courts Few courts have the clerical resources to accommodate duplicate entry of information while learning a new system and keeping up with daily work

Operation

Implementing a new court automation system is more like adopting a child than installing a washing machine It cannot be ignored after it is installed it requires constant care and attention Although computer systems tend to stabilize after the first hectic weeks of operation unceasing effort is required to ensure that the system meets its goals and objectives

Production

Many new tasks are introduced when a court is automated

Production work generally involves running programs to compile statistics generate forms reconcile accounts or prepare information Since these programs usually must read every case in the database they take a long time and can increase user response time if run during the day Most courts choose to run these types of programs at night

Along with the automated production activity comes the need for supplies Order and inventory processes must be established to ensure that the court has the tapes diskettes, toner cartridges forms printer cleaning kits and other materials needed to keep the system operating

Problem Management

No system is available 100 percent of the time Downtime for computers and peripheral devices though less common than a few years ago is going to occur, and plans should be in place to keep the court operational when the system is not Court staff should be the first line of support Because they are trained and have access to manuals and reference materials they should be prepared to handle many day to day crises that arise

A Help Desk should be established for all but the smallest courts The help desk serves as a single point of contact for all users for any type of problem Users should need to make only one telephone call to report a problem The help desk staff should have access to all the necessary resources to resolve the problem including programmers operations staff and vendor support personnel

After talking to the user the help desk contacts operations, programming or training staff if appropriate A service call may need to be placed with a vendor, if a maintenance contract is in place If multiple vendors are involved, the help desk coordinates their participation to resolve the problem For example solving a telecommunications problem may require the computer hardware modem and telephone companies

Operational Activities

Certain activities must be performed periodically to keep the system working smoothly and to protect the court against interruption of service and loss of valuable information Some of these operational activities include back ups off site storage database and disk reorganization and purges

In most automated systems, the computer stores information in files on disks Because disk drive technology is not infallible, backup copies of the disk are made, usually to computer tape

If the system fails and the information on a disk is lost, all the data files are erased and files from the last full backup are restored, or brought back from tape

As information is added and deleted from data files they become fragmented Data can be scattered in many locations and the system must work harder to access and store information, increasing response time Disks also must be reorganized This procedure consists of copying the files to other locations (on tape or disk) clearing the disks and then restoring the files in a location and order that permits efficient access While it is a simple activity it can take some time when data files are large

Most courts would like to have all the information for all their cases stored on the computer disk forever Unfortunately, this practice is usually too expensive to be practical Just as in a file room the

computer storage resources are limited and must be managed Retention schedules for electronic information need to be developed as they are for paper records Purging is the process of removing information from computer disks

Maintenance

When a computer and system software are purchased from a vendor a long term relationship is begun The equipment and programs will require installation upgrades preventive maintenance and repairs Though the courts can do some of this work most could not survive without assistance from the original service or product provider

Performance Monitoring

Operational aspects such as response time security and access backup network performance file access and disk utilization should be monitored

Security

Risk includes physical personal hardware software and network security

There are six resources at risk They are 1) information 2) programs 3) people 4) procedures 5) equipment and 6) facilities The five risks are 1) physical destruction loss or theft 2) intentional modification damage or injury 3) accidental modification damage or injury 4) unauthorized use access or disclosure and 5) failure or interruption The three actions are 1) prevention avoidance or deterrence 2) detection and 3) recovery correction or remedial action

A good security plan and a disaster recovery plan should be developed by the court

Wrap-up

Glossary of Terms

Acceptance testing

Tests of hardware performance and software functionality run by the court to ensure that the system being delivered by the vendor meets the requirements established in the request for proposal

Ad hoc reports

Individual customized reports that are directed at a unique query and generated as needed rather than as part of a periodic and routine schedule of reporting

Applications software

Software programs that are directed at providing user defined system functionality such as indexes event recording notices etc A court case management system is considered applications software (Compare with system software and operating system)

CJIS (Criminal Justice Information System)

See integrated criminal justice system

Coaxial cable

Cabling that offers fast performance high reliability and is capable of data video and voice transmissions Coax sometimes is difficult to install because of its relative thickness

Connectivity

The relative ability of processors and peripherals (i e terminals and printers) of different manufacture and size to link with each other and communicate

Cooperative processing

Sharing processing responsibilities between different computers For example a court case management system may run on a personal computer but may rely on a mainframe to store and manage information If a standard form is requested the personal computer formats the document and fills in case data it retrieves from the mainframe

CPU (central processing unit)

The principal computing device on a system With the arrival of personal computers (see microcomputer) the term is now less frequently used In the last decade it referred to a single centrally located computer that processed all of a system s programs See mainframe

CRT (cathode ray tube)

The television type terminal where users can view and update system information and files

Data element dictionary

A complete list of all data elements (i e unique categories of predefined information) that are required to be entered into the system Data elements typically include name date case number etc A large computer system may have several hundred discrete data elements A comprehensive data element dictionary not only gives the total number of data elements it also gives the format for each data element (i e for name last name first name middle initial for date MM/DD/YY) the number of allowable characters to be entered into each data element field and other special requirements

Data server

A processor that contains the court s information and is usually independent of other processors on the system

Database

A collection of information that is interconnected nonredundant serves a multitude of users and is independent of the applications software

Entity

A class of uniquely identifiable data elements for persons, places, events things, or concepts about which a court may want to know or remember information to coordinate, support and complete functions and processes Typical entities which are invariably nouns include attorney judge court rule etc See data element dictionary

Entry

Placing data into the system The data most often is entered by using terminal keyboards but scanners bar code wands magnetic strip readers and telecommunications systems are also used

Exception reporting

Reports that are generated whenever a predetermined set of conditions or circumstances fail to occur e g Cases Not Disposed After Twelve Months Defendants Who Failed to Appear, etc

Express warranties

Warranties given in writing in a contract or other legally binding document

F O B (free on board)

A term associated with delivery of goods F O B seller s location means risk of loss passes to the buyer when equipment is placed on the seller s loading dock or given to the commercial carrier buyer pays all shipping costs F O B buyer s location means the seller has risk of loss up to the point of physical delivery to buyer s location seller pays all shipping costs

Fourth generation language

A vendor package of system software used to manipulate information in a database Fourth generation languages employ relational databases (As opposed to third generation languages that usually employ hierarchical nonrelational databases) Fourth generation systems have central data dictionaries that are independent of application programs They also may include visual programming graded skill user interfaces and an integrated interactive multi function high level language programming environment Some popular vendor fourth generation languages are Ingres Unify and Oracle

Functional requirements

High level conceptual grouping of activities within the court that the computer must support They are ongoing and continuous are not based on organizational structure and categorize what is done rather than how it is done Generally functional requirements are identified by verb phrases such as generate warrants schedule arraignments print receipts etc

Inputs

The collection of forms and other media containing data elements and related information that are entered into the system See also outputs

Integrator

An individual or agency that provides linkages and connections between and among a variety of diverse hardware, software networks and functional activities

Integrated criminal justice system (CJIS)

An automated system that is capable of tracking a criminal case through its various stages in diverse agencies without duplication of data collection data storage, or data entry Most CJIS systems store all the information in a single database

Interface

The point where one system or activity connects with another e g , the point of connection between a local court computer system and the state mainframe the point where the court passes information to the prosecuting attorney s office

LAN

See local area network

Local Area Network (LAN)

A local area network consists of several personal computers or intelligent work stations directly linked over relatively short distances i e , from room to room or to nearby buildings that can share and access common data and work independently

Logical editing

A set of routines embedded in the application programs that preclude the possibility that certain kinds of inadvertent incorrect data can be entered into the system Typical logic edits include correcting addition checking calendar dates voiding the scheduling of a civil case until an answer has been filed etc

Mainframe

Although the definition has been changing as smaller systems become more powerful mainframes refer to very large computers capable of supporting several hundred (even thousands) of devices The mainframe offers highly sophisticated centralized data storage and control, but requires technically proficient staff to operate

Microcomputer

A single user desk top computer, sometimes called a personal computer (or PC) that consists of a processor keyboard, and monitor (or viewing screen) Most microcomputers use Microsoft Corporation s Disk Operating System or DOS See operating system

Menu

A checklist that serves as an interface between the system user and the application programs The person using the system decides what part of the system will be executed by selecting an item on the menu or checklist

Minicomputer

A medium sized computer that has many sophisticated features of a mainframe but is capable of closer deployment to end users

Modem (modulator/demodulator)

A device that allows computers to pass information to other computers over analog telephone lines

Module

Modules are portions of application packages comprised of interrelated functions Case initiation case scheduling accounting maintenance and other task groupings may be modules of a case processing system

Multi tasking

The ability to perform more than one computational task at a time e g to operate a spreadsheet while another document is being printed Because they only have one processing chip personal computers usually are not capable of performing multiple tasks

Multi user

A system that allows more than one person to use the system at the same time A microcomputer not connected to a LAN is a single user system

Navigation

The mechanisms including interfaces and menus that allow the user to move through the system s modules

On line

A type of system that allows the user immediate access to the computer s files to view records or enter data Contrast to batch systems where the user enters data on cards or another data collection medium which then has to be reentered into the computer

Operating system

The software sometimes called system software that tells the computer how processing tasks should be performed Operating systems are directed at controlling access to files and provide instructions to the computer that enable all of the hardware devices to work together

Outputs

The collection of hard copy reports screens and other media containing information generated by the computer (See also inputs)

Package

A vendor prepared set of application programs that provide required case processing and case management functions

Peripherals

Terminals printers scanners modems or any other devices that can be connected to a computer

Piracy

Violating vendor copyrights by unauthorized copying of software to an unlicensed location

Platform

The computing environment of the court hardware software or both

POSIX (Portable Operating System Interface for UNIX)

IEEE standard that defines the language interface between application programs and the UNIX operating system Adherence to the standard ensures compatibility when programs are moved from one UNIX computer to another

Print server

A processor that is totally dedicated to performing the printing functions of the system

Proprietary system

Software or hardware developed in the private sector that is not compatible with software or hardware offered by other vendors A proprietary system is copyrighted (and perhaps patented) and requires a license to use As a generalization, proprietary systems often are designed for operation on a single manufacturer s computer As a result to continue to use the operating system during a hardware upgrade requires the buyer to continue purchasing hardware from the original manufacturer Proprietary software also forces other users who wish to access the system to purchase the same manufacturer s hardware

Protocols

Software interfaces that allow enable computers on a network system to access each other

Remote access

Obtaining access either through dial up or network mechanisms to another computer and the associated data and information

Request for bid

A process by which a court may obtain price quotations on items for which detailed specifications are not required because virtually any manufacturer can provide the product or only a single vendor meet the need

Request for information

An informal process by which a potential buyer identifies its acquisition needs and solicits information from potential sellers regarding how its needs may be fulfilled A request for information usually precedes the more formal request for proposal

Request for proposal

A formal bidding process that sets out the buyer s acquisition requirements the legal terms of the proposed acquisition and invites vendors to bid on satisfying the buyer s requirements according to the preestablished legal terms and conditions The primary benefit of request for proposals is the promotion of fairness in the selection process

RFB

See request for bid

RFI

See request for information

RFP

See request for proposal

Screen layouts

The format of the information displayed on a computer terminal Ideally the format should be uncluttered and easy to read

Service bureau

A for profit enterprise that provides data processing resources, particularly hardware that enables users to have their software applications run and maintained

Shielded cable

Telephone twisted pair cable that is shielded to protect it from electrical interference and water

Standalone

A system often a microcomputer not connected or networked to any other computer system

System software

Software necessary to operate a computer System software includes the operating system file system peripheral device and controller drivers etc

Time sharing

Employment of a service bureau or use of a computer owned and operated by someone other than the court to do the work of the judicial branch

Transaction log

Part of the operating system database or applications software that provides a record of all processes and activities performed on a computer Transaction logs are an indispensable part of overall system security

Twisted pair cable

Telephone cable that is used to connect computers on a local network Although cheap to install and use twisted pair cable cannot transmit data at high speeds unless shielded cable is used

UNIX

An operating system in the public domain that runs on most of the larger computer platforms This ability to operate on a variety of computer hardware makes UNIX a major building block for those developers that wish to design systems that are capable of transmitting data to systems that are resident on another manufacturer s computer Although UNIX is in the public domain, many manufacturers also have developed proprietary versions of UNIX that enable it to operate more effectively on their own hardware (See also POSIX)

Update

An activity where a computer file or record is edited or changed As a rule only the those who originally created the data and those authorized to do so by court rule job description and security plan should be allowed to update a file or record See also view

View

The ability only to read and not change a computer record or file See also update

WAN

See wide area network

Wide area network (WAN)

A computer network that is much larger than a local area network Typically wide area networks cover great distances and may connect several LANs to a mainframe or minicomputer that acts as the network s data server