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RECOMMENDATIONS TO THE NINTH
ROUNDTABLE CONFERENCE OF CHIEFS OF THE COURT
ON THE DEVELOPMENT OF A STATEWIDE
COURT INFORMATION SYSTEM

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RECOMMENDATIONS TO THE NORTH CAROLINA ADMINISTRATIVE OFFICE OF THE COURT ON THE DEVELOPMENT OF A STATEWIDE COURT INFORMATION SYSTEM

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CONTENTS

I. INTRODUCTION

The State of North Carolina had determined a serious need to develop an integrated court information system. A grant application to fund the installation of the proposed system had been approved by the State Planning Agency and a software package was currently being considered. To evaluate whether the proposed software package was adequate to serve the needs of the state and whether it was, in fact, the best solution to the problems generating the needs for the information system, Bert Montague, Director of the North Carolina Administrative Office of the Courts (AOC) sought the advice of several specified consultants who had had experience with development of court information systems in other jurisdictions.

Under the auspices of LEAA's Criminal Courts Technical Assistance Project at The American University, the following consultants were made available to Mr. Montague: Larry Polansky, Chief Deputy Court Administrator for the Court of Common Please in Philadelphia; Tom Morrill, Director of ADP Services for the Judicial Department of the State of Colorado; and Robert Tobin, a consultant with considerable experience with automated information systems.* This consultant team, composed of two administrator-technicians and one management consultant, was selected by Mr. Montague because he felt their experience and background was most appropriate to the specific

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*By mutual agreement Robert Tobin was assigned the task of preparing the final report. The report expresses the views of the consultant team.

problems and needs of North Carolina. Mr. Polansky had been operating an automated court management and information system for a number of years and was familiar with numerous system variations. Mr. Morrill had directed the installation of the IBM BCS system in Colorado and had made a study of the Justice 370 system. Mr. Tobin had a vast amount of experience with court systems in general, including a study he performed for the state of North Carolina.

The consultants made a site visit to Raleigh August 8 and 9 to confer with Mr. Montague and others involved in the development of the proposed information system. During this meeting, the following tasks were accomplished:

- Review of the development plan currently being used by AOC as the basis for funding requests.
- Through conversations with Bert Montague, development of background information on funding and procurement steps taken in connection with the above plan.
- Through conversations with Bert Montague, definition of the broad goals and priorities of a court information system.
- Review of pertinent statistical data on case volume of North Carolina trial courts.
- Through discussions among the three consultants, development of an initial systems approach based on the preceding steps.
- Review of the proposed approach with Bert Montague, including cost aspects of immediate action steps and funding parameters.
- Development of the final list of proposed action steps; these appear in Section III of this report which contains consultant recommendations.

II. ANALYSIS

A. Background Information

North Carolina is beyond the question of whether there should be a computerized court information system. The problem facing Bert Montague is how to define the goals of such a system and then to choose the best methodology for developing it. The ensuing report addresses this problem.

North Carolina has a unified court system which consists of an Appellate Division, Superior Court Division and District Court Division. The two trial divisions (Superior Court and District Court) are organized into 30 districts, varying from one to seven counties in size. There are 100 counties in the state. The counties are grouped into four regions for purposes of judicial administration. The Administrative Office of the Courts has broad administrative authority over court operations. Among the administrative powers exercised by AOC are: budgeting, centralized purchasing, centralized control of forms and record management procedures, control of personnel classifications and salaries, control of accounting procedures and banking, setting facility standards and publication of statistical analyses of court operations.

One area of administrative control not fully exercised by AOC is direction of EDP development in the court system. At present the staff of AOC includes no full-time staff member with a systems background. Consequently, there has been limited computer utilization by AOC or by high-volume trial courts, although some trial courts use local government

computers for specific applications such as production of jury rolls. The one exception to the general lack of EDP development has been the Charlotte area.

Recently, Mecklenburg County (Charlotte) was funded to develop a "Defendant-in-Process" system which includes data from trial courts in that county. This project was largely financed by LEAA discretionary grants with limited AOC involvement. This has caused concern within AOC over possible compatibility problems between the system in Mechlenberg (the state's most populous county) and a statewide court information system. In addition to the Mechlenberg project, various other developments have caused the AOC to move more quickly toward creation of a computerized court information system:

- The need to supply CCH and OBTS data to the Police Information Network (PIN).
- The increasing need of AOC for information not available through the present system of aggregate statistical reporting.
- Increased interest in computerization at the trial court level.

In response to the need for a program of EDP development, AOC retained the services of Richard Gilbert, an EDP systems consultant with extensive experience in commercial computer applications. He produced a plan entitled "Action Plan for an Integrated Court Information System for North Carolina".

The proposed plan had the folowing prominent features:

- Speedy start-up with limited design work, this to be achieved by modification of the IBM software package for courts - BCS.
- Sole source procurement of IBM 370 series hardware for which BCS was designed.
- Installment of a computer installation in five regional centers (Ashville, Charlotte, Greensboro, Raleigh , and Greenville);

each installation would have a data center manager and three DP operators.

- Each center servicing other counties in the region through location of I/O terminals in these counties; however, many counties would continue to use manual systems due to low volume.
- The Raleigh center also serving as a central data bank for court data and would serve the informational needs of AOC as well as other state agencies such as PIN.

Using this action plan as a guide, AOC sought LEAA block money in North Carolina. While the proposal had support within the SPA and was approved at the state level, some opposition arose to the plan in the LEAA regional office and from a technical advisor to the governor. Moreover, the procurement features of the plan contravened state purchasing procedures.

The opposition to the plan not only centered on the sole source purchasing but on the heavy expenditures for staff and hardware required by the systems concept of five separate installations. To meet the purchasing procedure objectives, AOC opened up the whole procurement process. Vendors were invited to state their qualifications and a number of major firms took advantage of the opportunity -- among them IBM, Burroughs, Univac and NCR. State purchasing officials, state systems representatives and AOC staff were present at the presentations. This process is calculated to end in the generation of an RFP.

The objections to the systems concept were in large part responsible for the technical assistance request which led to this report. The following section of this report contains an assessment of the proposed systems concept.

B. Assessment of the Proposed Action Plan for an Integrated Court Information System

Court data processing is still in the early stages of development, and

very few unassailable truths have emerged. Thus, the consultant team can make no claim to omniscience in assessing the proposals of a clearly competent systems analyst. However, the consultant team has strong and honest differences with the approach suggested in the proposed action plan.*

The crucial weakness of the plan is that it never defines informational needs and requirements, nor does it distinguish in any way between the diverse needs of AOC and Superior Court Clerks. The plan deals entirely with the methodology, chronology and costs of systems installation without stating what the system will produce. Benefits are simply assumed and no short-term products are defined, an omission which has undermined confidence in similar large-scale development efforts elsewhere.

While the plan is modular in the sense that regional centers are phased in sequentially, the plan does not specify modularity in dealing with the many diverse record sub-systems which compose a court system (e.g., traffic, small claims, domestic relations, etc.). The apparent assumption is made that it would be fairly easy to modify one court software package to cover all aspects of the court record system. This assumption is very optimistic.

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*Mr. Morrill prepared a written commentary prior to the Raleigh meeting. He has unique experience in working with BSC and the IBM 370-135 in setting up the court system for Colorado.

The plan assumes that the IBM software package, BCS,* can be adapted to North Carolina's needs very readily. Unfortunately, the variations between and within court systems inevitably require substantial modification in court software packages, as has been demonstrated in Colorado. The proposed plan places far too much faith in the adaptability of court software packages.

The assumption with respect to BCS led to the recommended choice of the IBM 370-135 with which it is compatible. The 370-135 was adequate for the regional centers suggested by Mr. Gilbert. However, if there is to be one central duplexed configuration, then the 370-135 may not be the best computer to use for the heavy volume of a statewide court information system and consideration should be given to other computers.

From a technical, economic and administrative viewpoint, the deployment of five 370s is questionable. Given current teleprocessing technology (and probably the use of a different computer than the 370), all processing for the state could be done in one installation with inputs and outputs telecommunicated to regional centers. This would improve administrative control and would centralize staffing.

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*BCS uses an IBM language called FASTER, which serves file handling functions and teleprocessing. This has proved to have many limitations. Apparently IBM has indicated to North Carolina that a more advanced court software package would be substituted for BCS. This package, entitled JUSTICE 370, is flexible in its capability to collect data on a batch basis and is reported capable of providing extensive reporting through a sophisticated report generation program. However, the package has no telecommunications facility and would require extensive revision by a highly experienced communications programmer in order to service a state-wide system.

The regional concept is fine, but it is questionable whether it requires five full-blown computer centers with the attendant staffing and hardware costs. Less developed centers with mini-computers and input-output devices should suffice. These centers could also serve as message-switching centers for their regions.

The proposed plan has a certain logic if you accept its basic premises -- the overwhelming need to act fast and the existence of a ready-made court software package which can be adapted with relative ease. On balance a more deliberate approach and more skepticism about vendor claims seems advisable.

C. Needs and Priorities

A state court information system has to satisfy at least two levels of need:

- The requirements of the state court administrator in carrying out his statewide administrative functions.
- The requirements of clerks or trial court administrators in handling the day-to-day operations of trial courts.

1. State-Level Applications

Typically, the first computer applications established for state court administrators deal with such functions as budgeting, personnel management, equipment inventories and statistics. Normally, state-wide statistical applications are not a direct spin-off of a computerized trial court information system but are based on a special reporting process, either aggregate reporting or case-by-case reporting.

Bert Montague has clearly stated that he attaches priority to developing improved information on trial court operations. He needs data on

time sequences for case dispositions and activities of individual judges. This will require case-by-case reporting and use of batch data processing (pending the later development of a comprehensive on-line system in the trial courts).

2. Local-Level Applications

Bert Montague is prepared to provide computer services to the major trial courts of the state and to assume broader control over the information flow within the court system. The problem is to define development goals which are realistically achievable and in which he can have confidence.

Due to the complexity of the trial court system, the initial development target must be something less than the total trial court operation, presumably some major sub-system. Most of the major sub-systems of the North Carolina Court System are listed in the following outline:

District Court:	Criminal	Traffic Misdemeanors/ Preliminary Hearings
	Civil	Small Claims Domestic Relations Other
	Juvenile	
Superior Court:	Civil	
	Criminal	
Superior Court Clerk:	Probate	
Related Systems:	Jury	
	Juvenile Probation	
	Indigent Defense	

Each of the above sub-systems has unique features which require special record-keeping procedures. Moreover, they vary greatly in record volume as indicated by the following chart:

1973 Filings

	Criminal	Civil	Juvenile	Total
Superior Court	42,359	8,490	-	50,849
District Court	1,028,532	171,368	25,992	1,225,892
	1,070,891	179,858	25,992	1,276,741

Several Facts are apparent from the above statistics:

- The District Court has 96 percent of total trial court volume.
- Criminal cases account for 84 percent of District Court Volume as well as 84 percent of total trial court volume.

Analysis of criminal court statistics reveal the following:

- 64.4 percent of District Court criminal cases involve motor vehicle offenses.
- 47.8 percent of the criminal caseload of Superior Court is represented by de novo appeals from the District Court, many of which are motor vehicle cases.

Based on volume, it is clear that the first emphasis of a trial court information system should be upon criminal cases, particularly traffic cases. There is, however, a collateral need to produce criminal case data for the criminal justice system primarily in the non-traffic area. It appears therefore that the initial development module should be the criminal segments of both the District and Superior Court Divisions, with an initial emphasis on motor vehicle cases.*

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*An alternative method of development is horizontal, i.e., moving through each segment at one court level. However, the needs of the criminal justice system dictate a vertical approach encompassing both court levels.

In short, the two priority development areas of the North Carolina Court Information System are:

- Statistics based on individual case reporting.
- Development of the criminal module of a trial court information system.

III. RECOMMENDATIONS

The consultant team makes the following recommendations:

- AOC should adopt a new approach to developing a court information system. A suggested approach is contained in Appendix A to this report.

- AOC should stop the hardware procurement process which is currently in process. The revised approach does not require hardware rental in the first year of development. Purchase of machine time will suffice for the initial effort.

- AOC should recruit a core systems staff immediately. The staff should be headed by a senior analyst, with some knowledge of criminal justice sytems. He should be supported by two programmer/analysts and a secretary. As soon as possible, these staff members should visit data processing installations servicing court systems to ascertain what software could be readily adapted to North Carolina's needs.

- AOC should revise its LEAA funding to conform to the approach contained in Appendix A. A budget is contained in the appendix. This budget assumes contractor support for some aspects of software development.

- AOC should form an advisory group of persons knowledgeable in court data processing and use this group (not to exceed three members) as follows:

  - Screening and selection of a systems staff.

  - Assisting in evaluating staff performances and work products.

  - Assisting in the selection and monitoring of software contractors.

  - Providing knowledge of court data processing experience.

  - Review and make recommendations with respect to eventual systems plan.

- AOC should obtain an immediate on-site appraisal of the Mechlenberg County project from a person knowledgeable in court data processing.

APPENDIX A

This appendix contains a brief outline of an alternative system approach geared to achievement of the two priority achievement goals -- a case reporting system of AOC and initiation of an on-line information system at the trial court level through development of a criminal case module. Both goals may be achieved in parallel lines of development and both assume the creation of core systems staff in AOC within two months.

Case Reporting System

This system will be based on filing and disposition data for all cases in the North Carolina trial courts with the probable exclusion of traffic cases in which a waiver of trial has occurred.

This system will produce all current statistics but will provide a variety of additional facts and correlations, including age of pending cases, time sequences on case disposition, profiles of individual judge activity, etc.

The system should be primarily designed by the core systems staff within AOC and would serve as their orientation to the whole court system. It would also provide contact with clerks and the practical difficulties involved in setting up a statewide system.

The technical aspects of this sytem are not as difficult as the administrative aspects. Courts should be submitting data within six months of the time the design effort is started. It will take an additional three to four months to obtain a relatively complete, accurate and smooth flow of data. This effort would be occurring in the middle of calendar

year 1975 with a view to building up to a full reporting year in 1976.

The system will be essentially a batch system and should not require a lot of machine time. Use of a service bureau is anticipated, pending the installation of a central computer system for AOC some time in the second year of development. Given the numerical nature of the case reporting inputs, use of optical scanners may be desirable for data input to eliminate an extensive key-punching operation.

Criminal Module of Court Information System

North Carolina trial courts have achieved a high degree of uniformity in forms and in record management procedures. Moreover, the state has a well-structured uniform ticket which can be used as an arrest warrant as well as a summons.

Consequently, the criminal module (and subsequent modules)* can be developed at one site and transferred to other courts within the state without significant modification. It would probably be preferable to use Raleigh as a test site for the first module since the central installation and the systems staff will be located there. However, Greensboro is a suitable site based on its caseload and the indicated level of local cooperation.

The advisory group may be able to identify some software package which could cut North Carolina's development time, but a major design effort cannot be avoided. It will require contractor support for the core staff

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*Subsequent modules have not been defined yet. This should be done. The development of these modules will also take place at one site and then be moved out to other court locations.

in order to produce the on-line system which is the object of the development.

The criminal module should initially concentrate on traffic cases. With minor modifications, the traffic system can be adapted to misdemeanors and preliminary hearings, i.e., all cases at the District Court level. More complexities will arise when Superior Court criminal cases are added due to the indictment process, jury trials and more procedural steps.

The criminal module should initially stress indexing and docketing functions but have the capability to handle calendaring. The system must also have the capability to generate CCH and OBTS data. Once implemented at the test site the criminal module could be introduced in high-volume courts. These courts would possibly have a mini-computer linked to the central installation. This mini-computer would be available for applications unique to the particular court.

All processing would be performed at the central installation where data would be stored and in all probability a duplexed system would be maintained. High-volume courts would have input-output capability permitting on-line entry and inquiry through terminals, as well as ability to produce high-speed, hard copy outputs.

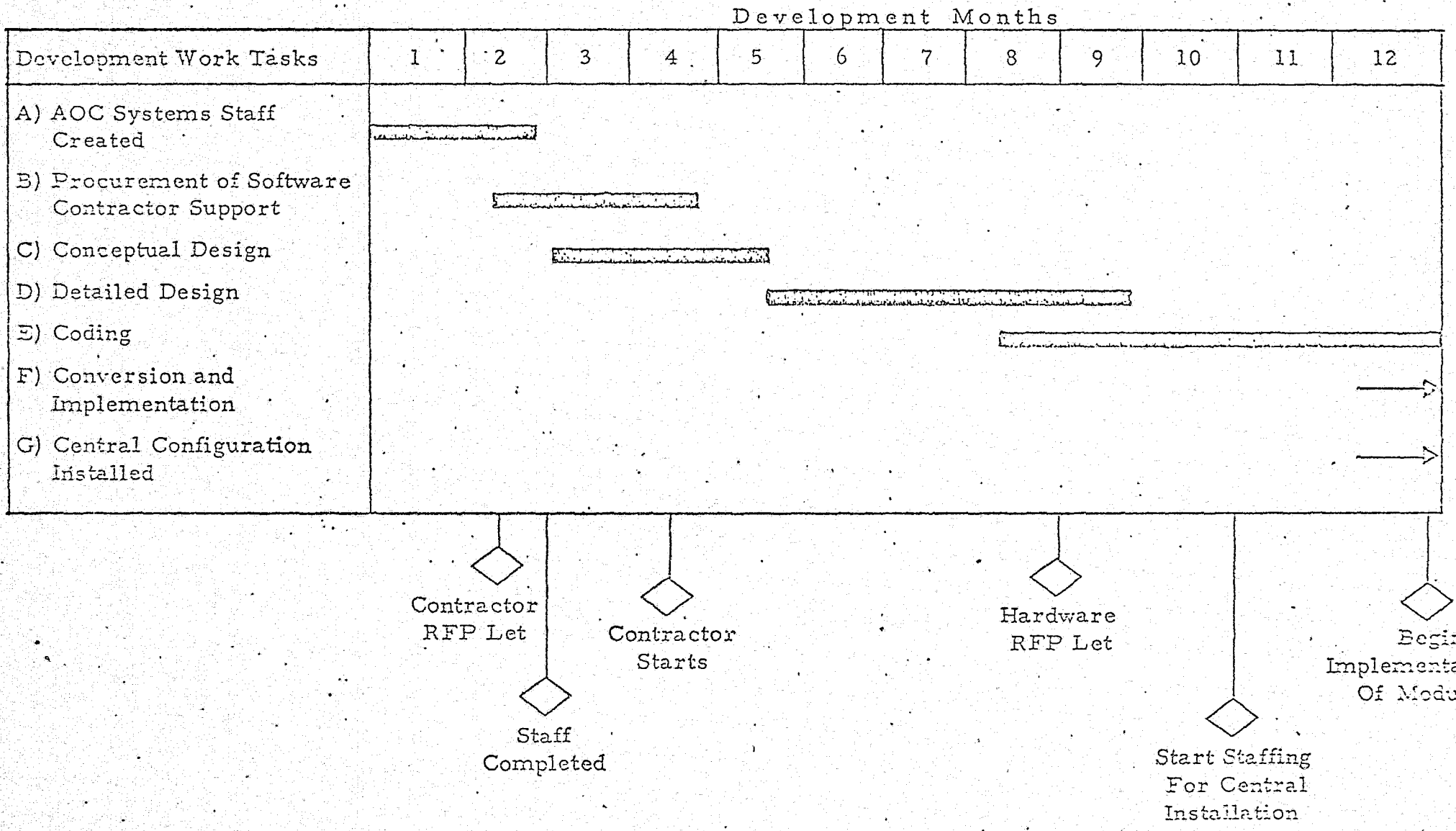
The major courts with mini-computers could serve as message switching points for the smaller courts in the region. Many courts will, however, not need any terminal connections due to lack of volume.

It is not anticipated that courts with mini-computers will need any staff, except perhaps a junior programmer. Systems and programming services when needed would be provided by AOC. It is not anticipated that any hardware

will be leased in the first year of development. Machine time will be rented as required. Hardware should not be ordered until the system design has progressed sufficiently to define bidding specifications. Four to five months lead time will be required for hardware and two months lead time for expanding the technical staff. The installation should be operational early in the second development year.

The first year action steps and the budget for first-year development are attached.

TIME SEQUENCE OF MAJOR FIRST YEAR WORK TASKS IN CONNECTION WITH CRIMINAL MODULE



FIRST YEAR BUDGET

A)	AOC Systems Staff		
	Personnel Costs		
	Senior Analyst	$20,000	
	Programmer-Analyst	14,000	
	Programmer-Analyst	12,000	
	Secretary	7,000	
	Benefits	7,000	
	Total Personnel Costs		$60,000
	Non-Personnel Costs		
	Office Space (500 square feet @ $6 per square foot)	3,000	
	Supplies/Equipment	3,000	
	Travel	4,000	
	Total Non-Personnel Costs		10,000
B)	Advisory Group		
	30 Days at $135 per day	4,050	
	Travel	3,400	
	Total Advisory Group Costs		7,450
C)	Contractor Services		
	Software Support, Machine Time, Keypunch		61,000
		TOTAL	$138,450

END