Florida Board of Regents   State University System Documents

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Implementation of regional data centers for the State University System of Florida

State University System of Florida Management Information Systems

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IMPLEMENTATION OF REGIONAL DATA CENTERS

FOR THE

STATE UNIVERSITY SYSTEM OF FLORIDA

IMPLEMENTATION OF REGIONAL DATA CENTERS

FOR THE

STATE UNIVERSITY SYSTEM OF FLORIDA

Management Information System
Office of Administrative Affairs
State University System of Florida

February, 1973

The State University System of Florida consists of nine state universities and a central office of the Chancellor. Three of these, the University of Florida at Gainesville, Florida State University at Tallahassee, and Florida Agricultural and Mechanical University at Tallahassee were in existence prior to 1900. Four institutions were established between 1960 and 1970 - the University of South Florida at Tampa, Florida Atlantic University at Boca Raton, the University of West Florida at Pensacola and Florida Technological University at Orlando. Two additional institutions were opened in September of 1972 - the University of North Florida in Jacksonville and Florida International University in Miami. Of these nine institutions, five offer instruction beginning at the freshman year and extending through graduate study. Four, namely, Florida Atlantic University, the University of West Florida, the University of North Florida, and Florida International University begin at the junior year and extend through graduate study.

The State University System is governed by a Board of Regents of nine members appointed by the Governor for nine-year terms except for appointments to fill unexpired terms.

The goal of the Board of Regents is a distinguished University System which will provide maximum educational opportunities for the citizens of Florida without unnecessary duplication or proliferation through distinguished State Universities which have separately designated responsibilities and which will collectively offer complete programs in all disciplines and professions.

Each of the nine universities is basically a general purpose institution. In fulfilling such a role, each institution offers baccalaureate and selected graduate degrees in the arts and sciences, in business administration and in education. Certain other specialized undergraduate and graduate programs with a more limited student demand are assigned to specific institutions in the system. Each university engages in research and extension activities consistent with its assigned role.

The Chancellor is the Executive Officer of the Board and is vested with broad administrative responsibilities for long-range planning and budgeting. Under the leadership of the Chancellor, a broad base for interinstitutional planning and coordination has been established. This base has been the launching point for the Regional Data Centers and the standardization of computer data systems.

In the area of computers there are three state agencies that are directly involved in the operation of data centers. These agencies, all in the State Department of General Services, are the Electronic Data Processing Division, the Division of Purchasing, and the Division of Communications.

The Electronic Data Processing Division is charged by law with the responsibility for data processing in the State of Florida including the universities and exempting only computers used exclusively for research or experimental purposes by any state university. This includes control over the acquisition of all hardware and software, system design, operating policy, and they may actually take over and operate data processing installations.

In the Fall of 1969, the universities were all going their separate ways in both computer hardware and systems development. Even where two universities existed in the same city, no thought was given to the sharing of facilities or development cost in the computer area. This duplication could not be justified and was creating an increasing area of vulnerability for the universities to some form of centralization at the State level.

Beginning in the Fall of 1969, the State University System began a program to encourage hardware sharing and shared systems development. Building on a strong base of interinstitutional committees, the development of two systems was begun in January of 1970 - a Student Data System under the Committee on Admissions and Records and a Financial System under the Committee on Finance and Accounting. These groups further restricted their initial efforts to an admission system and the basic components of the financial system called the CORE Fiscal System and began development efforts. At about the same time a request to upgrade an institutional computer system to provide instructional support service was returned to the institution with the suggestion that they look at the possibility of remote job entry terminals connected to one of the large research computers available in the State University System. The Institution then recommended an IBM 1130 as a terminal connected to an IBM 360/65 on another campus in lieu of their hardware upgrade and began supporting their entire instructional and research program in a terminal environment. While these demonstrations were interesting and demonstrated the feasibility of sharing systems development cost and computer hardware, these small efforts only increased our awareness of the economies available if we moved aggressively to further sharing of personnel and hardware.

In March of 1971, the Management Information Systems staff of the Board of Regents proposed as a beginning point for discussion a reorganization plan for computer utilization in the State University System. The goal of this plan was to more effectively utilize the funds available for computing and was directed specifically toward 1) taking advantage of the economies of scale to be realized from a reduced number of more powerful computers; 2) the elimination of duplication of system development efforts then taking place in the State University System; 3) to expand the service of research computers to the broad area of instructional support. This plan called for the establishment of a central computer facility to provide instructional support and research service to all of the state universities

Administrative support would come from one of four regional data centers located in Tallahassee, Tampa, Gainesville and Miami. The systems staffs of the various institutions would be channeled into five functional systems staffs to support the various areas of university operations. The universities not located at these four regional center sites would be serviced by a terminal data center that would contain the necessary input/output devices for administration, research, and instructional support on those campuses. The only staff which would remain under the control of the institutions would be a small management systems staff to support the unique institutional requirements as they exist.

Objections to this plan were immediate and vigorous. The institutions objected to any loss of personnel or any loss of control over their own computer facilities. The one exception was Florida Atlantic University and Florida International University who put together a planning group to look at ways in which they could operate under some sort of regional plan. Florida Atlantic University had been in operation for a period of ten years and Florida International University was scheduled to open in September of 1972. The Planning Committee worked out a plan for the establishment of the first of the regional data centers in Miami and this plan was approved by the Board of Regents in September 1971. The plan did not coincide with the regional center plan as proposed by the Board Office but it was a good, workable modification of that plan. A copy of the organization plan of the Southeast Regional Data Center as well as the outline plan itself is included as an appendix to this report.

After the establishment of the Southeast Regional Center, we began to get the other institutions together for a second round of talks working toward some kind of a regional solution to computing.

In the Fall of 1971, we received from each region a Regional Center Plan which was supported by the institutions in that region. Each of the regional centers is organized on a different basis, however, the variations in the plans were not judged to be significant and the plans were approved by the Chancellor and the implementation of the Regional Data Centers was begun. The Implementation of the Regional Data Centers involved a significant number of computer changes all over the State of Florida as the institutional computers were either replaced or expanded in order to provide service for that particular region.

The 1972 Florida Legislature appropriated a supplemental sum of $700,000 to fund the overlap cost of computers and other expenses of phasing in to regional data centers.

As the regional data centers began to come into existence, we found a number of other fringe benefits which have been helpful in the establishment of regional data centers. One of these has been the availability of commercial software on a per data center rather than a per institution basis. Another was the fact the regional data centers themselves gave a considerable impetus to the reduction in number of software systems required to próvide support to the institutions. The Regional Data Centers and the Policy Boards for the Regional Data Centers were very reluctant to authorize separate payroll, separate personnel, or separate student data systems. The directors themselves were aggressive in moving the regional centers toward single application systems to support a functional area at the institutions they serviced.

Another of the changes which came about as we moved toward regional data centers was a new role for our Regional Center directors. The directors hired for regional data centers have been, without exception, individuals who are dedicated to service. They see their role as director of a computer center as providing a service to the institutions of that region. We also have a high degree of cooperation between regional data centers.

In addition, once the plans were approved, the cooperation that we have received from the Electronic Data Processing Division, the Communications Division, and the Division of Purchasing has been outstanding. We have been operating on timetables that were understandably tight and these agencies have made every effort to help solve problems that we encountered. The timetable for the Central Florida Regional Data Center is an example of how rapidly we were able to move within the State in acquiring hardware and communication lines in order to implement the regional data center. Copies of the implementation plans for each of the Regional Data Centers as well as the general outline plan which was approved by the Board of Regents and the State Cabinet are attached to this report.

Table of Contents

A Reorganization Plan

for Computer Utilization in

The State University System of Florida

"The goal of this plan is to more
effectively utilize the funds available
for comptuing and is directed specifically
toward:

1. Taking advantage of economies of
    scale to be realized from a re-
    duced number of more powerful
    computers.

2. Elimination of duplication of
    system development efforts now
    taking place in the University
    System.

3. Expand the service of research
    computers into the instructional
    support area."

Management Information Systems
Florida Board of Regents
March 8, 1971

In the last year the Management Information System staff has actively pursued a course of action to effect economies in the use of computers in the State University System. These efforts have been in the area of systems standardization and computer sharing.

During this time, we have demonstrated within the University System that systems standardization through the medium of interinstitutional committees is a workable concept and substantial progress has been made in standardizing the financial systems and student data systems of the universities.

We have also seen the installation of two small computers on the campus of Florida Technological University and Florida A. & M. University to make available on those campuses the power of the research computer of the University of Florida.

But the small steps we have taken seem only to point us to larger economies that are before us if we reexamine our systemwide computer needs and the advances in hardware that have taken place in the last few years.

The traditional approach of having each administrative computing center prepare a program for each application to be processed on its computer is unacceptable in view of the monetary and management constraints existing in our system. The concept that each institution must possess on its campus, under its control a computer for the entire spectrum of research instructional support and administration is beyond our capability to support and, were it supportable, not an effective utilization of funds.

The issue is not whether change will come but who will provide the initiative to shape and channel the form of this change to make it serve the best interest of the University System.

After several months of study and countless conversations with those concerned with Data Processing, both within and without the State University System, we are proposing a plan that restructures our organization and computer hardware to address these changes that have come about in the computer and communication industry and within the State University System.

PROPOSAL NO. 1

Establish a central computer facility to provide instructional support and research computer service to all of the state universities.

The basic building block of this center would be the present Research Computing Center at the University of Florida and the new center would be located in Gainesville. Policy direction for this center would come from an Interinstitutional Policy Board.

Service would be provided to institutions by batch terminal devices selected to give the desired input/output capability to each institution as well as an interactive terminal network to support APL, Basic and Instructional Programs.

PROPOSAL NO. 2

Establish four regional data centers, located in Tallahassee, Tampa, Gainesville and Miami to provide central file and computing capability for administrative support of the universities.

These centers would be staffed for operation of hardware. The only systems personnel available to the Center would be those required for maintenance of internal computer software. These centers would also schedule and operate the input/output devices for batch research and instructional support at Florida State University, Florida International University, and the University of South Florida.

PROPOSAL NO. 3

Five functional systems staffs to serve the various areas of university operation with management control by the Board of Regents staff and systems design input from the interinstitutional councils or committees which serve the various functional areas.

These five systems staffs would be:

- Financial Data Systems
- Student Data Systems
- Planning and Budgeting Data Systems
- General Data Systems (Library, Placement, Alumni)
- Medical Data Systems

This proposal will make possible a much more rapid change to the Data Base Systems necessary to support Program Budgeting. In conjunction with Proposal No. 2, it will simplify tremendously the ability of planning and budgeting personnel to get comparable data in a reasonable operational timeframe.

Priorities for system design would be provided to systems groups by the inter-institutional councils or committees with the schedule of design and programming developed by the Director of the Systems group and reported to interinstitutional councils or committees on a monthly basis.

PROPOSAL NO. 4

That University of West Florida, Florida Atlantic University, Florida A. & M. University, University of North Florida, The University of Florida Medical Center, and Florida Technological University be served by a Terminal Data Center that would contain the necessary input/output devices for administrative research and batch instructional support on those campuses.

PROPOSAL NO. 5

That each institution be authorized a management systems staff to provide for unique institutional requirements as provided in the attached staffing patterns.

This would preserve for the institutions the ability to examine or add to the management controls established in the Data Base Systems.

Cost Considerations

Computer costs in the State University System have increased dramatically in the face of increasing tight dollar resources.

The cost of hardware has increased from 1.8 million dollars in 1968-69 to 3.3 million dollars for 1970-71 and a 1971-72 projection of 4.0 million dollars (which does not include adequate computer power for the new institutions). In addition, these figures do not reflect dollar cost that will be incurred if we

are to adjust our instructional support programs to provide a basic level of computer support. We believe that these costs would grow to around 5 million dollars by 1973-74 if each institution continues its own uncoordinated growth.

Our cost figures for this proposal on hardware cost show a 1972-73 cost of 3.2 million dollars with a significant reallocation of resources to the instructional support area. (Planning figures included interactive terminal network of 193 terminals.)

In the personnel cost area, the figures are as dramatic. Beginning with a 1968 salary cost of 1.3 million dollars, we have increased to 2.8 million dollars this year with 3.5 million dollars requested for 1971-72. The cost of staffing the data centers would remain about the level of the 1971 budget and we would be comfortably staffed with the duplication of system development efforts removed.

The hardware and personnel cost will be modified as detail plans for implementation are developed by the appropriate data system staffs but these should be minimal.

Planning and Coordination

A planning and coordination schedule has been developed and is included as Table 7. This is designed to provide an outline of the coordination steps to be taken and would be developed in final form soon after appointment of the three top level positions of the reorganization plan.

It should be noted that this schedule calls for simultaneous parallel development of the Tampa, Miami and Tallahassee Data Centers. The Gainesville Center would be basically unchanged except for administrative control.

what is?

TABLE 1

PROPOSED ORGANIZATION

```
                              ┌──────────────┐
                              │   MGT INF    │
                              │   SERVICES   │
                              └──────┬───────┘
         ┌───────────────────────────┼───────────────────────────────┐
                                    ▷3
   ┌──────────────┐         ┌──────────────────┐            ┌──────────────┐
   │  DIR OF ADM  │         │ DIR OF INSTRUCTIONAL │         │  DIR OF REG  │
   │  SYS & PROC  │         │  SUPPORT & RESCH     │         │  OPERATIONS  │
   └──────┬───────┘         │   COMP C.TR          │         └──────┬───────┘
         ▷1                 └──────────────────┘                   ▷2
   ┌──────────────┐                                        ┌──────────────┐
 ▷4│  ADM SYS     │                                      ▷5│ REGIONAL DATA │
   │  GROUP       │                            ▷6           │   CENTER      │
   │              │                                         │  TALLAHASSEE  │
   │   FINANCE    │                                         └───────────────┘
   │    STUDENTS  │                                           GAINESVILLE
   │    PROG & BUD│                                             TAMPA
   │     GENERAL  │                                              MIAMI
   │      MEDICAL │
   └──────────────┘
```

1. EDP Division System Review
2. EDP Division Management Review
3. Inst. Direction Through Policy Board
4. Institutional Involvement Through
   Interinstitutional Council and Committee
5. Institutional Involvement Through User Group
6. Regional Data Centers Would Service Batch
   Research to Instructional Support and
   Research Computer

```
                                        ┌──────────────┐
                                      ▷5│  TERMINAL     │
                                        │   DATA        │
                                        │   CENTER      │
                                        └───────────────┘
                                          ORLANDO
                                          BOCA RATON
                                          JACKSONVILLE
                                           PENSACOLA
                                            TALLAHASSEE
                                             UF/HC
```

TABLE 2
SYSTEMS STAFFING

	Finance Date	Student Date	Planning & Budget	General Systems	Medical	Total
DIR OF SYS GP	1	1	1			
MGR SYS & PROG	2			1	1	
COMP DOC SPEC	1	1	1	1	1	
DP COORD	1	1	1			
SYS ANAL II	4	2	2	2	2	
SYS ANAL I	2	1	1	1	1	
COMP PROG II	8	5	4	4	4	
COMP PROG I	2	2	2	2	2	
SEC II	2	1	1	1	1	
TOTAL	23	14	13	12	12	74

Each systems group would be charged with development of operational systems for all institutions in the area assigned with design criteria and final system design approval to come from interinstitutional committees in appropriate area and the EDP Division of the Department of General Services.

TABLE 3

OPERATIONS STAFFING

		RSCH CNTR	RGNL CNTR	TOT REG CNTR	3RD SHIFT	TERM DATA CENTER	TOT TERM DATA CENTER	3RD SHIFT	TOTAL
M A N A G E M E N T	D/C DIR	1	1	4		1	5		10
	ASST D/C DIR	1	1	4					5
	SEC III	1	1	4					5
	SEC II					1	5		5
O P E R A T I O N S	COMP OP MGR II	1	1	4					5
	COMP OP MGR II					1	5		5
	COMP OP SUPVR	2	2	8	1				10
	COMP OPER III	4	4	16	2	2	10	1	30
	COMP OPER II	2	2	8	1	4	20	2	30
	EDP CTL CLK	2	2	8	1	2	10	1	20
	EDP LIBRARIAN	2	2	8					10
	CLK MESSENGER		1	4					4
DATA ENTRY	KP SUPVR 2		1	4					4
	KP SUPVR 1	1	2	8		1	5		14
	KP OPER	2	13	52		7	35		89
SOFT-WARE	SYST PROG	2	2	8					10

TABLE 4

MANAGEMENT SYSTEMS GROUP STAFFING

		RSCH CNTR	RGNL CNTR	TOT REG CNTR	3RD SHIFT	TERM DATA CENTR	TOT TERM DATA CENTER	3RD SHIFT	TOTAL
MGT SYS	SYS ANAL II		2	8		1	5		13
	PROG II		2	8		1	5		13
	TOTAL	21	39	156		21	105		282

A Plan for the Establishment of a Regional Data Center
to Provide Computer Services for
Florida Atlantic University and Florida International University

Objectives

To provide the strongest possible computer support within foreseeable financial resources for the two State Universities in the southeast Florida geographic area, through the creation of a Regional Data Center. To provide within this Center a staff organization and a level of equipment capability that will be adequate for, and responsive to, the growing needs of these two institutions for support of administration, instruction and research. Requirements to be satisfied include:

1) All administrative data processing for the two Universities. This work would be accomplished primarily in off hours. Common statewide data systems would be implemented, with only minor variations permitted in cases where it is deemed absolutely necessary to satisfy particular needs of the individual institution.

2) Batch instructional support, with access to the computer by faculty and students being provided for extensive time periods each day. An operating schedule which would allow this type of access up to 16 hours per day, 6 days each week, is envisioned.

3) Inter-active (typewriter) terminal support for instruction and research during significant time periods each day, and offering FORTRAN, BASIC, a CAI language and possibly APL and conversational PL-1 servicing. A two shift schedule of availability is anticipated, for a total of 16 hours daily or 96 hours per week.

4) Batch research support for all "normal" research computing needs. Provision to be made for overload or exceptional kinds of research processing to be handled at a major computing facility elsewhere in the State University System (e.g., the University of Florida Computing Center).

Assumptions

Certain underlying assumptions must be understood and accepted by Administrators at the two Universities and by officials at the State level if implementation of this plan is to be successful. These include:

1) Motivation for this development is NOT to save money in the short run. On the contrary, higher expenditures are anticipated at the outset than would be necessary if FAU and FIU proceeded on their separate ways, due to one-time startup and conversion costs. There would be both short-term and long-term enhancement of computing capability for the two Universities, and sizeable long-term dollar economies in staff and equipment expenditures.

2) Equipment specifications and staffing commitments are to be adequate to insure success of the venture (which, in turn, will be a model for further regionalization efforts in the State).

3) The regional data center organization will be separate from either of the two participating universities, but responsive equitably to their individual needs. A committee composed of equal membership from the two institutions will be in an advisory role to the Director of the Center.

4) The budget of the data center will be set out separately from the budgets of the two universities. Through the 1972-73 fiscal year, each university will contribute an amount to the center equivalent to what it would otherwise allocate for the support of an appropriate computer facility. Also, during this interval, the extra costs of startup and conversion would be absorbed by the Chancellor's Office. Beyond the 1972-73 fiscal year of operation, the data center would generate its "foundation" budget directly as a State University System function. Its base level of operation would be underwritten by overall SUS funding. It would be left to FAU or FIU to supply additional money to the center if extraordinary quantities or kinds of computer support were to be demanded by that institution beyond the base level (e.g., if an exaggerated use of computer terminals for instruction is desired by a university, that institution must contribute extra funds to the center to cover the added costs).

5) Each university would pledge the necessary manpower and effort to the task of converting its data systems to the standard regional or statewide systems. This would require assignment of effort from Finance/Accounting and Registrar's Office personnel on a more accelerated timetable than would otherwise be necessary.

6) Present computer personnel would be given careful consideration for each staff opportunity that is created at the Center and at the Terminal location. No current employee needs fear loss of employment, although a change in location might be necessary. In general, all staff would be retained or offered equal or expanded assignment in the new operation.

7) The Regional Data Center would be physically housed in the multi-purpose building currently being constructed at the Tamiami location of FIU. It is intended that location shall not bias the servicing of the two universities.

Organization

Total number of recommended staff positions is tentatively set at 62, with an annual salary cost of approximately $572,000.

The Data Center and the Terminal Center will both contain academic support systems and programming personnel, interface and control personnel related to data systems operation, equipment operating personnel, and a systems analyst/programmer engaged in Institutional Analysis and related management support applications development. It is recommended that staffing be adequate for a 3-shift, 6 days per week operation at the Data Center, and for a 2-shift, 6 days per week operation at the Terminal Center.

Terminal Center personnel would be part of the overall Regional Center staff and the Director of the Terminal Center would report organizationally to the Regional Center Director.

The Regional Center staff would include a larger complement of computer operations personnel, a data systems and programming staff engaged in development of all core systems for the two Universities, an Academic Services group comparable to its counterpart at the Terminal Center, two Systems Programmers having highly technical software and operating systems responsibilities, plus data control clerks and key machine operators.

Although all planning, design and programming of operational data systems would be accomplished by the staff of the Data Center, programming to access the data base of the individual University, to extract information from it and to perform whatever management analysis is desired by administrators or by Institutional Research specialists would be accomplished at each institution. Such programming would not tamper with basic, generally identical operational data systems in use for both Universities.

It is recommended that the Regional Center be coordinated through a newly created position at the Board of Regents staff level. Proposed title of the new position is Director of Data Centers. The Director of Data Centers would be responsible for coordination of this and future University System regional data centers. He would participate in establishing management policies within each regional center and would serve as chairman of the Policy Board. His experience in helping to give birth to the first "model" regional center would help him in coordinating future regional center development into a consistent, effective and efficient network, serving all units of the State University System.

Perhaps most important of all to assure a proper balance of priorities, to guarantee impartiality and to guide the gradual development of the Data Center, would be the Policy Committee working closely with the Regional Center Director. The Committee would offer guidance, set policy and supply valuable input from the various segments of the Universities. Its membership would consist of two representatives of each institution appointed by their President, Director of Data Centers SUS, and Director of Regional Data Center as a nonvoting member.

In addition, each Regional and Terminal Data Center would be expected to appoint a computer users group to meet on a regular schedule to provide user input to the center management.

Equipment

Target date for accomplishment of planning steps, computer acquisition, preparatory conversion work, transfer of personnel, and commencement of joint operations is July 1, 1972. A 60-day overlap of present FAU computer equipment and of the current FIU/University of Miami arrangement in parallel with the new Regional Center computer operation is projected, ending September 1, 1972.

It is fully understood that a competitive bidding procedure will be followed for the acquisition of the computer hardware to be installed in the Regional Data Center. The sequence of events would include: final determination of computer, peripheral and terminal equipment, Operating System and other software specifications by the EDP Division, Department of General Services, with the participation of selected faculty and staff members representing the two universities; publishing of specifications; invitations to bid; receipt of proposals; evaluation of proposals; benchmark testing; final selection of the successful vendor. Final determination of vendor and exact model of computer hardware could be expected by December, 1971 or January, 1972. There is reason to believe that all major computer manufacturers would be interested in this contract and would have suitable models and configurations to propose.

For preliminary costing purposes, and to furnish a focal point for discussion as to the level of computing capability that is needed and also is within range of financial feasibility, specific configurations have been explored. A 512k byte central processor has been costed, equipped with 12-#2314 type disk modules and 6-60kb magnetic tape units, plus 1100 line/min. printer and 1000 cpm reader at the central location. There would be a high speed card reader/punch/printer terminal at the Terminal Center, and separate reader/printer terminals at both universities for student and faculty access. Each campus, in addition, would have inter-active terminals for instructional and research use. A total of 30 such terminals is envisioned at the outset, the allotment to each campus to be determined by suitable formula. There would be two CRT terminals on each campus for administrative purposes.

Such a complex of equipment would lease for approximately $35,000 per month. This cost would include charges for remote terminals and the costs associated with communication lines.

The addition of lease charges for unit record machines, student and data center keypunches, test scoring equipment, data collection stations in the University Libraries, etc., would appear to bring the total expenditure for EDP equipment (on a rental basis) for the combined two-university operation to approximately $40,000 per month.

Budget

Total operating budget for the Regional Data Center, including its satellite Terminal Center, during its first year of operation (fiscal 1972-73) would be about $1,126,000. This figure includes the following elements:

Staff salaries at the two centers............................... $572,000

Equipment rental.. 480,000

Other operating expenses.. 34,000
   (Includes supplies of stock forms, stock cards, magnetic
   tape, telephone, travel, office supplies, etc.)

Capital outaly.. 20,000
   (Includes computer room and office furniture, storage
   shelving, dispatch area equipment, student desks, etc.)

OPS... 14,000
   (Includes 4-FTE Student Assistant machine operators for the
   two locations, @ $3,500 per FTE student)

Software costs.. 6,000
   (Includes probable cost of vendor-supplied language processors
   or other software, if unbundled, or cost of other commercially-
   available systems packages, figured @ $500 per month.)

TOTAL.. $1,126,000

NOTE: This compares with a combined FAU/FIU budget request for 1972-73 of
$1,155,000. The combined request consists of the following:

	FIU		FAU	
Staff................................	(34)	$279,613	(29)	$276,878
Expense (incl. computer rental).....		283,773		294,750
Other (OCO, OPS)....................		7,160		13,500
		$570,546		$585,128

In addition to the above operating cost elements, there would be one-time
startup or conversion costs, as follows, beginning in fiscal year 1971-72 and
carrying into 1972-73:

1) Conversion programming.................................. $ 40,000
   This consists of reprogramming effort for certain
   computer applications at FAU, written in System 360
   Assembly Language. Primarily Testing & Evaluation,
   Institutional Analysis and Academic Record systems.
   Required effort estimated as 4 man-years @ $10,000.
   Expenditures would be needed prior to July 1, 1972.
   This is effort above and beyond available currently
   authorized FAU staff.

2) Parallel computer rental................................ $ 43,000
   This is figured on the basis of two months of present
   FAU computer rental, excluding unit record, library
   and test scoring equipment which would be retained
   @ $17,600 per month, plus two months of FIU DATA-100
   terminal rental and projected monthly charges to be
   incurred at University of Miami, total $3,900 per
   month.

3) Moving expenses.. $ 4,000
   This represents cost of moving possibly 8 staff members
   from Boca Raton to Miami. Calculated @ $500 each. This
   cost could begin early in 1972 and extend through summer
   and fall, 1972.

4) Transportation charges, FAU computer.................... $ 3,000
   This represents costs of shipping IBM System 360-40
   computer configuration back to the manufacturer.   _____

   TOTAL ONE-TIME, STARTUP AND CONVERSION COSTS.............. $ 90,000

Additional Considerations

1) The number of interactive (typewriter) terminals specified in the
   initial configuration is 30. Physical placement of these units is not
   necessarily to be on the basis of equal number to each University.
   Allotment instead is to be by formula, based upon FTE, number and type
   of courses and major academic programs using computer terminals, and
   related factors. The formula is to be created by agreement of the two
   Universities.

2) It must be emphasized that each University must be given opportunity to contribute to the establishment of equipment specifications, in cooperation with the EDP Division. This will assure input from concerned faculty members in particular, regarding their special needs. EDP Division staff must not proceed on basis of only preliminary configuration data. Likewise, there must be heavy involvement of University staff and faculty during the evaluation phase of this acquisition, once vendors' proposals have been received.

3) It should be observed that new Administrative and Professional position classes may well be needed in the staffing of the Regional Data Center. It will be necessary to reflect the higher level of professional, technical and personal qualifications needed in the more sophisticated Regional Center environment as compared with the data center of an individual university. It must be clearly understood that a high level of expertise will be requried, and that salary scales must be competitive with industry. The need for flexibility indicates that at least some of the new position classes must be A & P.

4) Job description of certain Data Center personnel (e.g., the Senior Software Specialist, the Software Specialist, the Systems Coordinators responsible for Data Systems development for the two institutions) must reflect a broader aspect of service to be rendered to the academic departments of the two universities. These highly knowledgeable specialists must be made available as resource persons to assist in such programs as Computer Systems, Computer Science, and Computer Engineering. Regardless of principal location of employment, they must be available to both campuses. They must be easily accessible to faculty of both institutions, and their working schedules must permit more than casual involvement in support of computer-related academic programs.

Management Information Systems

FLORIDA INTERNATIONAL

BOARD OF REGENTS

CHANCELLOR

POLICY BOARD SUS-SE DATA CENTER

DIR OF REGIONAL DATA CTR

FLORIDA ATLANTIC

2

1

2
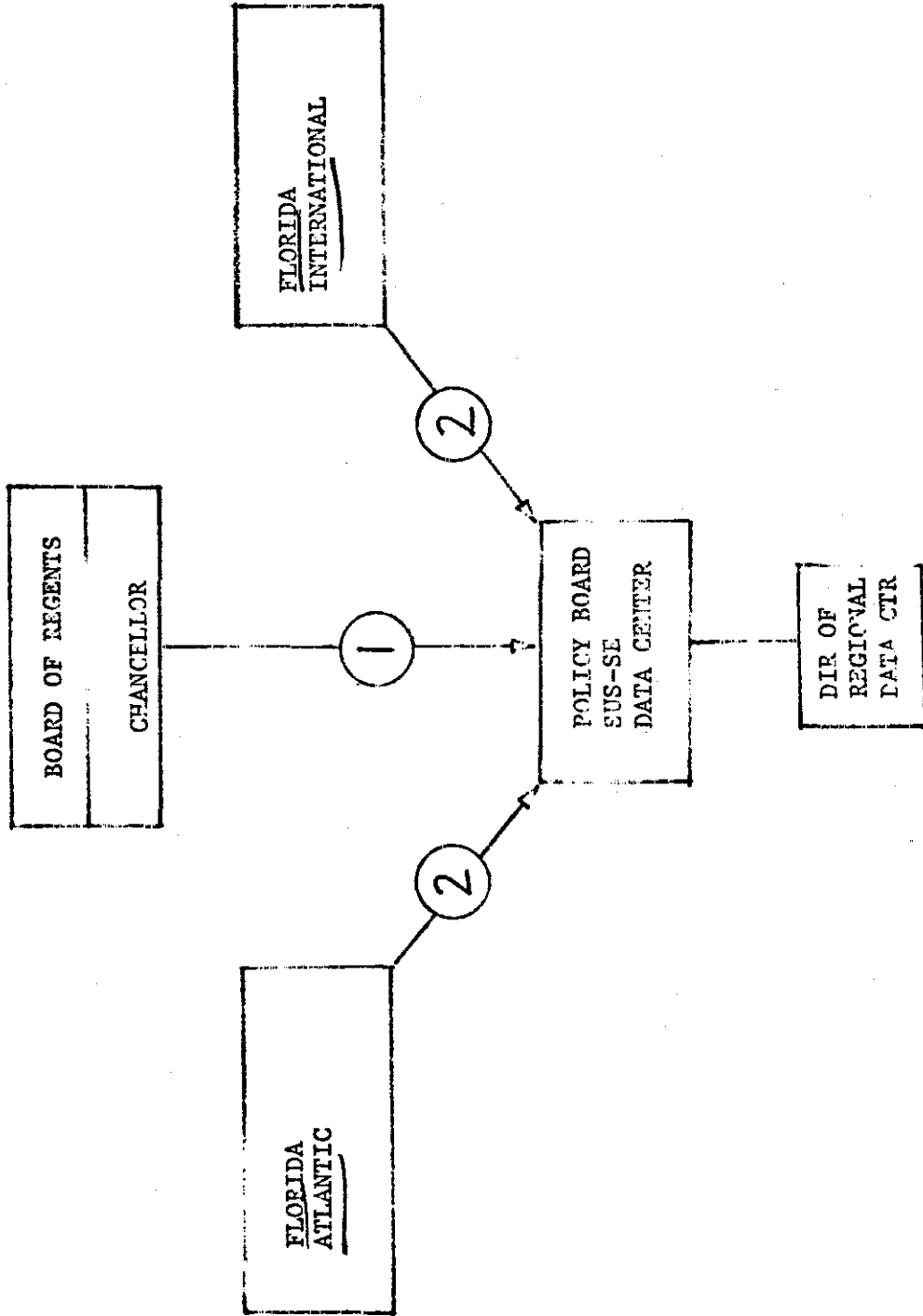
COMPUTER STAFFING AT
HOST UNIVERSITY

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  │ OPNS MGR │                    │ SOFTWARE │        │ COORD    │          │          │
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KEY PCH SUPVR I		COMPUTER OPER III		EDP CONTROL CLERK(2)		SOFTWARE SPEC		SCIENTIFIC PROGRAMMER		SYSTEMS ANAL II (4)

KEY PCH OPER (6)		COMPUTER OPERATOR II +							COMPUTER PROG II (2)		

PER SHIFT
3 SHIFTS
TOTAL 6

COMPUTER OPERATIONS

OPERATING
SYSTEMS AND
RELATED
SOFTWARE

ACADEMIC SUPPORT
FOR HOST UNIVERSITY

1 SYSTEMS ANALYST
FOR EACH OF FOUR AREAS
INSTITUTIONAL ANAL
ADMINISTRATIVE AFF
STUDENT DATA SYSTEMS
OTHER DATA SYSTEMS

INTERFACE WITH DATA
SYSTEM USERS AT HOST
UNIVERSITY

ORGANIZATION OF
SUS-SOUTHEAST
DATA CENTER

AUG 31 71

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HOST SITE

| | SYS ANAL II | SYS ANAL II | SYS ANAL II | | TERMINAL SITE |

| | COMP PROG II | COMP PROG II | COMP PROG II | |

| | ADMIN DATA SYSTEMS | STUDENT DATA SYSTEMS | OTHER DATA SYSTEMS | |

DATA SYSTEMS DEVELOPMENT

II-9
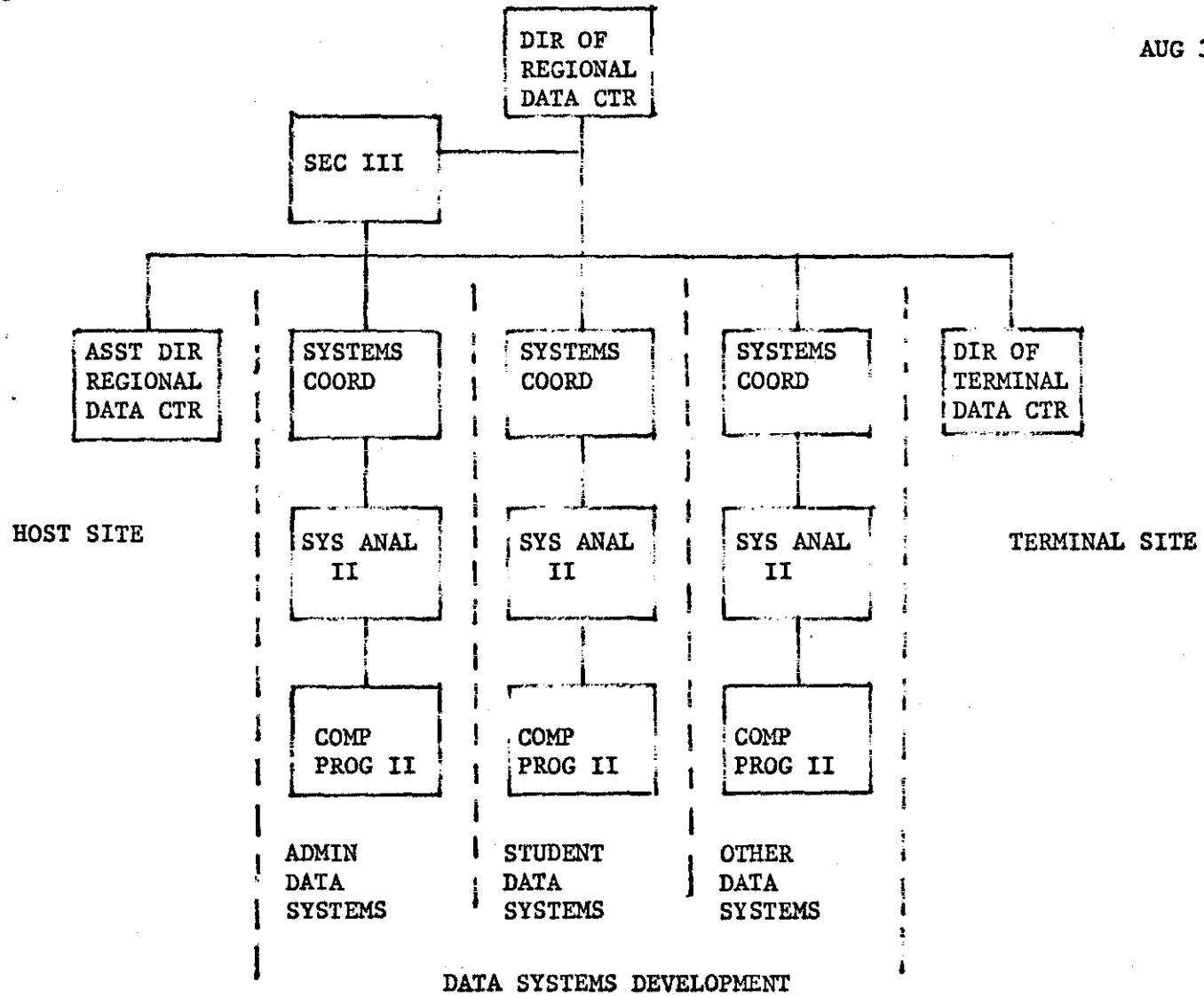
COMPUTER STAFFING
AT TERMINAL DATA CENTER

AUG 31 71
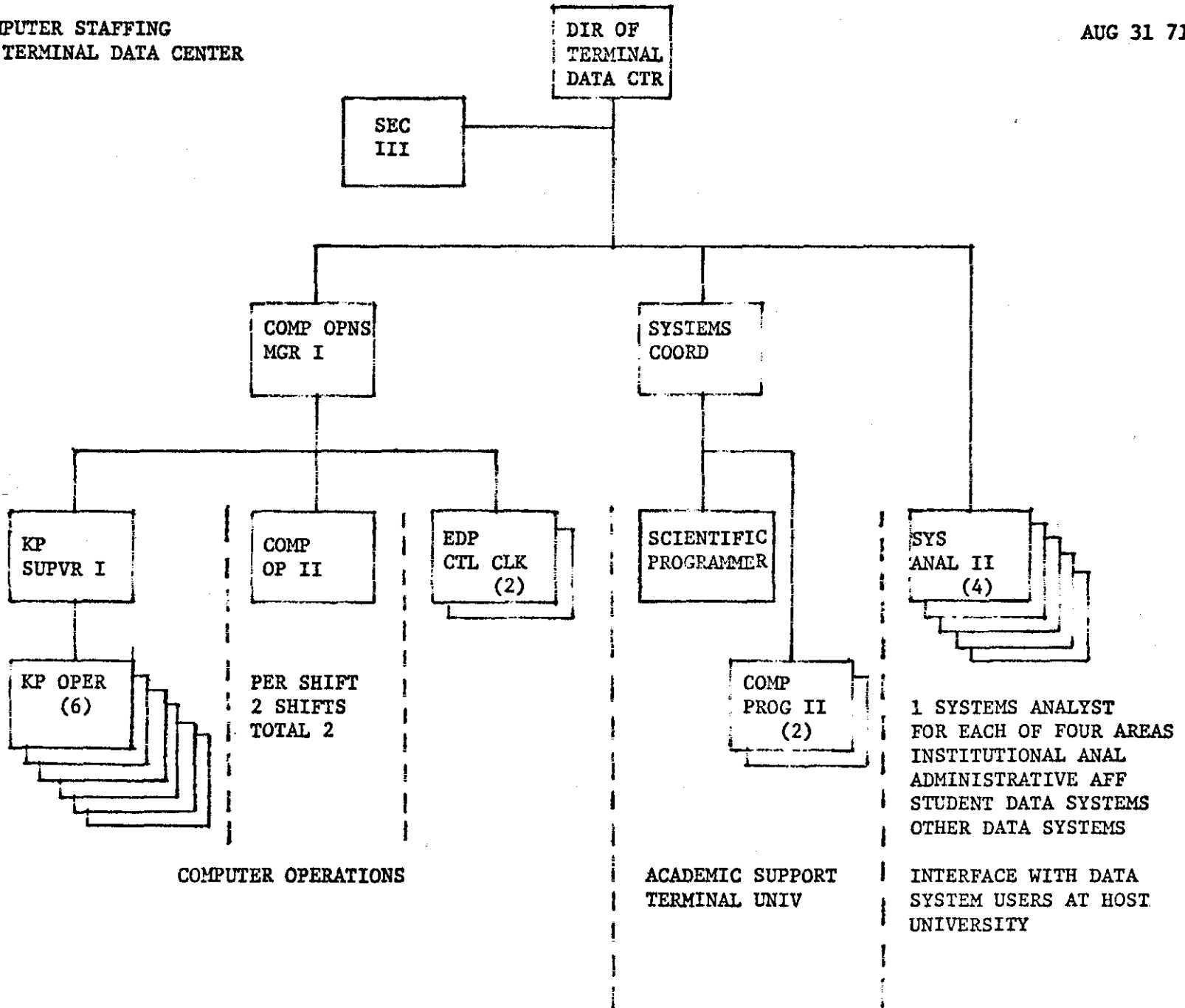
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                 │ MGR I      │              │ COORD    │  │
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| KP SUPVR I | COMP OP II | EDP CTL CLK (2) | SCIENTIFIC PROGRAMMER | SYS ANAL II (4) |

KP OPER (6)

PER SHIFT
2 SHIFTS
TOTAL 2

COMP PROG II (2)

1 SYSTEMS ANALYST
FOR EACH OF FOUR AREAS
INSTITUTIONAL ANAL
ADMINISTRATIVE AFF
STUDENT DATA SYSTEMS
OTHER DATA SYSTEMS

COMPUTER OPERATIONS

ACADEMIC SUPPORT
TERMINAL UNIV

INTERFACE WITH DATA
SYSTEM USERS AT HOST
UNIVERSITY

A General Plan for Establishment of Regional Data Centers
to Support the State Universities of Florida

Objectives

   To provide the strongest possible computer support for the State Universities of Florida within foreseeable financial resources of the State University System by creation of four regional data centers. Requirements to be satisfied include:

1) All administrative data processing for the State University System. Common statewide software systems to be developed and implemented as rapidly as possible with only minor variations permitted and these only where there exist a demonstrable need for variation from standard systems.

2) Where a separate research facility does not exist on campus (all institutions except Florida State University and the University of Florida).

except??

   a. Batch Instructional Support with access to computer by faculty and students being provided for extensive time periods each day.

   b. Interactive terminal support for instruction and research during significant time periods each day offering a conversation and computer assisted instruction capability.

   c. Batch research support for "normal" research computing needs. Provision to be made for overload or exceptional need to be processed by the Research Computing Centers at the University of Florida or Florida State University.

Assumptions

   Certain underlying assumptions must be understood and accepted by the administration of the State and University System if implementation of this plan is to be successful.

1) Primary motivation for development of regional data centers is to provide a reasonably uniform and adequate level of computer support across the entire spectrum of computer service required by the Universities at the least possible cost. It is probable that there would be one time conversion and startup cost but these would be accompanied by improvement of computing capability and sizeable long-range dollar economies in staff and equipment expenditures.

2) Equipment specification and staffing commitments will be adequate to insure success of plan.

Designation of Regional Data Centers

   The four regional data centers to serve the State University System are to be designated as follows:

1) **SUS-Southeast Regional Data Center**
   Located at Tamiami campus, Florida International University, to serve
   Florida Atlantic and Florida International Universities.

2) **SUS-Northeast Data Center**
   Located at University of Florida campus to serve University of Florida
   and the University of North Florida.

3) **SUS-Northwest Data Center**
   Located at Florida State University campus to serve Florida State
   University, Florida A. & M. University, the Board of Regents Staff,
   and the University of West Florida.

4) **SUS-Central Florida Data Center**
   Located at University of South Florida campus to serve University of
   South Florida and Florida Technological University.

Governance of Regional Data Centers

Each regional data center will be under the control of a Regional Center Policy Board. This Policy Board will consist of two representatives of each institution served plus one representative appointed by the Chancellor. The Policy Board for the Northeast Regional Data Center will include two representatives of the University of Florida Health Center, and the Central Florida Regional Data Center one representative of the University of South Florida Medical School.

This Policy Board will have as its function primary responsibility for operation of the Regional Data Center. These duties will include but not be limited to:

1) Selection and employment of Regional Data Center Director.

2) Budgetary planning for Regional Center.

3) Resource allocation within the Regional Centers as related to all
   Regional Center resources.

4) Detail planning for implementation of the Regional Data Center.

General Policy Guidelines

1) Each university would pledge the necessary manpower and effort to the task
   of converting its data systems to the standard regional or statewide
   systems. This would require assignment of effort from Finance/Accounting
   and Registrar's Office personnel on a more accelerated timetable than would
   otherwise be necessary.

2) Present computer personnel would be given careful consideration for each
   staff opportunity that might be created. No current employee needs fear
   loss of employment, although a change in location might be necessary. In
   general, all staff would be retained or offered equal or expanded assign-
   ment in any new operation.

3) In addition to the Policy Board, each Regional and Terminal Data Center
   would be expected to appoint a computer users group to meet on a regular
   schedule to provide user input to the center management.

4) This plan affects the two Research Computing Centers only in that it
assumes a level of specialized support available which will be coordinated
by the Regional Centers directly with the Director of Research Computing
Centers.

Not governed!

A General Plan for Establishment of Regional Data Centers
to Support the State Universities of Florida

(Approved by Board of Regents)
(December 10, 1971)

1. Four Regional Data Centers shall be established to serve the administrative needs of the State University System.

> One center to serve Florida State University, Florida A. & M. University, the University of West Florida and the Board of Regents.
>
> One center to serve the University of Florida and the University of North Florida.
>
> One center to serve University of South Florida and Florida Technological University.
>
> One center to serve Florida International and Florida Atlantic.

These assignments will be flexible and the universities may be served by more than one regional center if the need arises.

2. Each university will be served by terminal devices that will time-share the regional center equipment with the understanding that sufficient capability must exist to service the needs of each university.

Universities that have a regional center located on campus may be served directly from the computing center.

3. The technical staff of the universities, the Board of Regents and the EDP Division of the Department of General Services will begin immediately developing the detailed plans for each regional center.

4. The development and implementation of each center is to progress as rapidly as is feasible and practical, subject to necessary funding by the legislature.

5. There will be an Advisory Committee established at each regional center that will function as outlined in Chapter 23, Florida Statutes. Each president will appoint the representatives he wishes to serve in that capacity.

6. The administrative structure controlling the center operation will be determined by the universities.

A (Plan) for the Establishment of the Northeast Regional Data Center
to Provide Administrative Computer Services for
University of North Florida, University of Florida and
J. Hillis-Miller Health Center
October 27, 1971

admin only!!

Objectives

To provide the State University System entities in the Northeast Florida
geographic area with the strongest administrative computer support within fore-
seeable financial resources, through the creation of a Regional Data Center and
three Terminal Data Centers. To provide within this organization a staff and
level of equipment capability that will be adequate for and responsive to the
growing needs of these institutions for support of the administrative function.
Requirements to be satisfied include:

> All administrative data processing for the institutions involved. Common
> statewide data systems would be implemented, with only minor variations
> permitted where it is deemed absolutely necessary to satisfy particular
> needs of the individual institution. However, an institution would not
> be unduly restricted from development of limited interim data systems or
> expansion of present ones to satisfy administrative requirements which are
> common statewide but for which statewide data systems have not been developed.
> Administrative data systems for the Health Center, E.I.E.S., and I.F.A.S., which
> are unique to the institution, will be developed and implemented. Initial em-
> phasis would be placed on maintaining the current level of support.

Assumptions

The feasibility of this plan is entirely dependent upon certain assumptions
which were made in the course of its construction. It is essential, therefore,
that they be understood and accepted by administrators at the institutions involved
and by officials at the state level. These include:

1) The Regional Data Center complex would be composed of the Northeast
   Regional Data Center, University of North Florida Terminal Data Center,
   University of Florida Terminal Data Center, and the J. Hillis Miller
   Terminal Data Center.

2) Motivation for this development is NOT to save money in the short run.
   There will be both short-term and long-term enhancement of computing
   capability for the institutions and potential for long-term economies
   in staff and equipment expenditures.

3) Additional State University System funds will be required to activate
   this plan. Certainly, equipment and staffing at the Regional Data
   Center and at each terminal center must be adequate to insure success.

4) The Regional Data Center organization will be separate from the parti-
   cipating institutions but equally responsive to their individual needs.

5) The budget of the Regional Data Center will be separate from the budgets
   of the participating institutions.

6) The Regional Data Center will be under the control of the Northeast
Regional Data Center Policy Board. Day-to-day operational control of
the Terminal Centers will be vested in the respective units with the
requirement that budgets for the Terminal Centers, additional equipment,
and additional personnel be subject to review by the Regional Data Center
Policy Board prior to submission by the controlling unit to the Board of
Regents.

7) The Regional Data Center will continually research and study the "state
of the art" of computer hardware and software in order to take advantage
of the latest practical technology.

8) It must be understood that a high level of expertise is required within
a Regional Data Center complex and that salary scales must be competitive
with industry. The need for flexibility indicates that at least some of
the new positions classes be A and P. These positions classes should
reflect the higher level of professional, technical, and personal quali-
fications.

9) The Northeast Regional Data Center will in concert with all other State
University System Regional Data Centers collaborate in the development
of all standard State University Systems.

10) The relationship between the three Terminal Centers and the Regional
Data Center, when it is completely operational, will be essentially the
same as that between a buyer of computer services and the vendor of these
services.

K true

Organization

The Northeast Regional Data Center organizational complex will be composed of
a Regional Data Center Policy Board, a Regional Data Center, and three Terminal
Centers.

The Regional Policy Board will consist of two representatives from the Univer-
sity of Florida (tentatively, Vice President Elmore and Vice President Hanson),
two representatives from the University of North Florida (tentatively, Dean Dungan
and Dean Haywood), two representatives from the J. Hillis Miller Health Center
(tentatively, Vice President Ackell and Wayne Herhold, Director, Shands Teaching
Hospital and Clinics), and the Board of Regent's Director of Regional Data Centers.
All members shall have one vote. Proxy voting in the absence of a member will be
permitted. Responsibilities and authorities of the Board will include:

1) Responsibility for recruitment and selection of a Director for the
Northeast Regional Data Center.

2) Responsibility for the direct control of the Northeast Regional Data
Center including appointment of personnel, recommendations for hardware,
software, and all other matters.

3) Responsibility for review of budgets, personnel appointments, and equip-
ment acquisitions for the three Terminal Centers. Neither the Northeast
Regional Center Policy Board nor the Director of the Northeast Regional
Data Center shall have direct line authority over the Directors of the
three Terminal Centers.

4) Determination of those systems common to the users that lend themselves to common efforts and establishment of priorities for their implementation, thereby avoiding duplication and waste in systems development and operation

5) Responsibility for development of overall policies governing the operation of the Regional Data Center.

6) Responsibility for the determination, in a given situation, of the most effective location for developing and implementing a given system in either a Terminal or the Regional Data Center.

Initially, Northeast Regional Data Center will consist of a Regional Center Director and appropriate staff. This staff will be charged with the responsibility for development of a short and long range plan for staffing, equipment, programming, etc., for the Regional Center. When fully operational, the Regional Data Center staff will include the Director's staff (secretary, assistant for planning and development, etc.), an application software group (systems coordinators, analysts, programmers, etc.), a computer operations group (systems programmers, operations manager, computer operators, etc.), a data conversion section, and other supporting personnel. Primarily, all statewide systems which are common to both the University of Florida and the University of North Florida would be developed and implemented by the data systems and programming staff of this Center. They would also have the responsibility for implementation of statewide systems for the institutions.

Each Terminal Data Center will include a director, his staff, a computer operations group, a data conversion section, and an applications software group which will be responsible for the development and implementation of institutional data systems.

Equipment

The Administrative Computing Center at the University of Florida is currently supplying service through a terminal system to the University of North Florida. It is recognized that due to normal growth the present configuration (360/50) in the Administrative Computing Center is inadequate to serve both institutions in addition to the J. Hillis Miller Health Center. Also, the data systems in operation at the J. Hillis Miller Health Center will not run at the Administrative Computing Center without extensive conversion. Therefore, the Northeast Regional Data Center, as conceived in this plan, will have to consider other hardware capabilities.

A comprehensive study will be conducted by the Regional Center Director and his staff to determine the most feasible hardware approach for the entire Northeast Regional Data Center Complex.

Special Considerations

1) Both at the Regional and State level, careful consideration should be given to the development of statewide health oriented data systems which might constitute a fifth Data Center, similar in concept to the research efforts now underway. Examples of future systems having a similar systems requirement would likely include the J. Hillis Miller Health Center, the medical school teaching hospital complex under development, and the University of South Florida and similar affiliated teaching hospitals throughout the state.

Budget

Fiscal Year 1971-72

Director of Regional Data Center	$22,000
Systems Coordinator	14,650
Computer Systems Analyst II (2)	20,000
Secretary III	5,500
	$62,150

Amount required for nine-month period (October 1, 1971, to June 30, 1972)

Fiscal Year 1971-72 $46,611

Salaries	$46,611
Expense	4,000
OCO	2,500
Total	$53,111

The six-year financial plan for the Northeast Regional Data Center will be developed by the elected Policy Board with the assistance of the Director of the Northeast Regional Data Center. A viable Regional Data Center would include a large, sophisticated computer with the terminal data centers only maintaining necessary input/output equipment to handle their individual workload. The Regional Data Center staff would be heavily oriented toward systems personnel whereas the terminal data center staff would be primarily operational-type personnel with limited systems personnel.

Schedule of Priorities

To avoid disruption of current data processing support, the development of the Northeast Regional Data Center must proceed on a planned and carefully executed basis. The following schedule of priorities is recommended:

1) Establishment of the Regional Policy Board.
2) Recruitment and selection of the Regional Data Center Director.
3) Determination by the Regional Center Director of the total resources (budget, equipment, personnel, etc.) available.
4) Policy Board allocation of resources to the Regional and Terminal Data Centers.
5) Determination by the Regional Data Center Director and Policy Board of immediate hardware needs for the Terminal Centers.
6) Survey of current and short-range software requirements for each institution.
7) Determination of common software requirements and assignment of development priorities.
8) Development of a long-range plan for hardware and software development.
9) Acquisition process for immediate hardware needs completed.
10) Implementation of long-range plan.

NORTHEAST REGIONAL DATA CENTER

University of North Florida	Board of Regents Chancellor	University of Florida Administrative Services	J. Hillis Miller Health Center

② ① ② ②

**Policy Board
SUS – NE Regional
Data Center**

**SUS – NE Regional
Data Center**

Service　　　　Service　　　　Service

University of North Florida Terminal Center	University of Florida Administrative Services Terminal Center	J. Hillis Miller Health Center Terminal Center
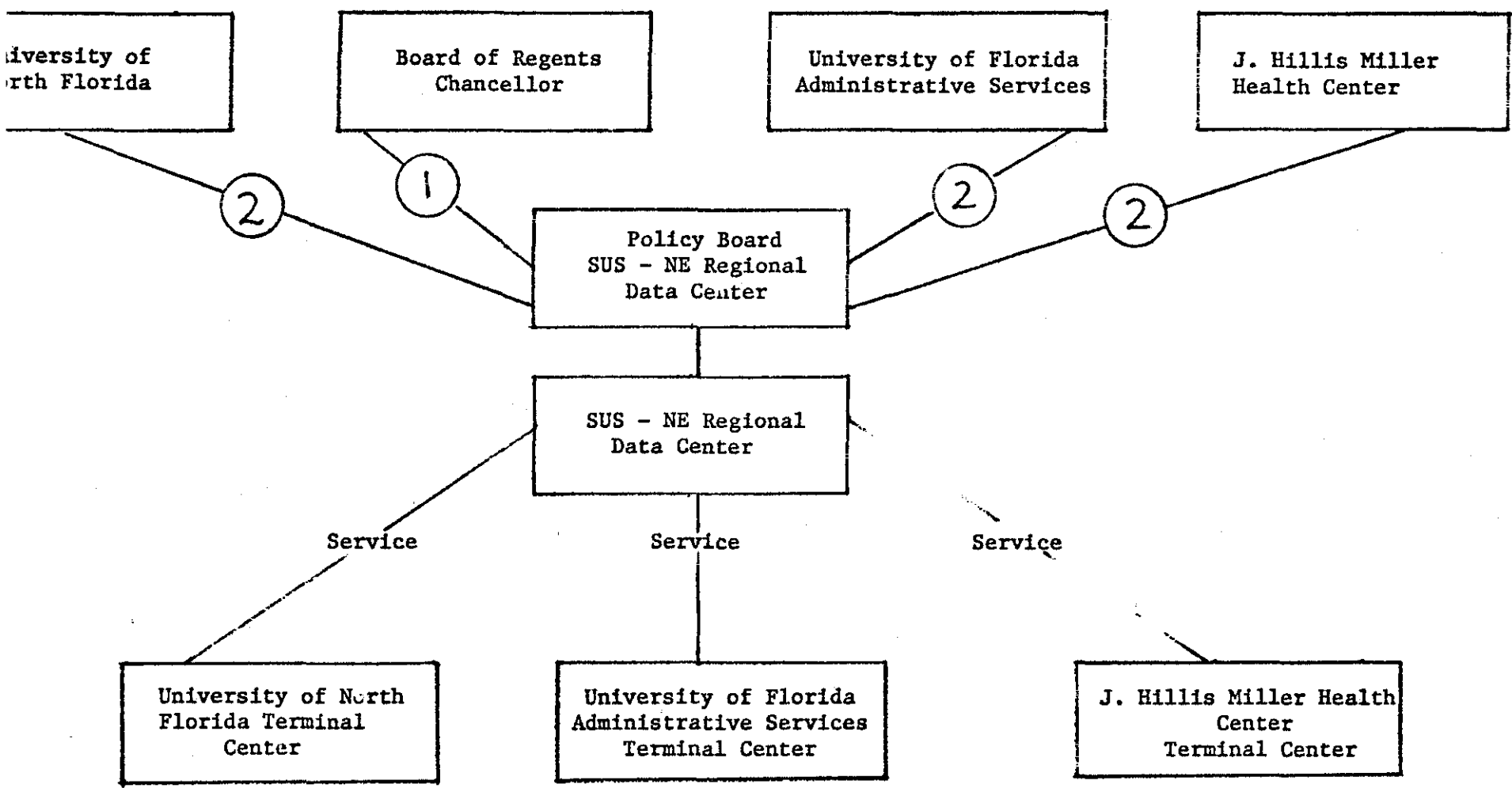
AN IMPLEMENTATION PLAN FROM THE NORTHEAST REGIONAL DATA CENTER

Timetable for Center Development

(handwritten annotations: what? when? why? decided? just want to be computer? did it even belong to N.E.? what happened to all 360/65 for U of Fla Research + Instruction?)

September 1972: Appoint Regional Center Director.

Establish Five Positions:
1. Associate Director for Administrative Comp.
2. Associate Director for Instructional and Research Computers.
3. Technical Coordinator.
4. Operations Manager.
5. Accountant II.

Formally Establish Computer Users Groups.

Install 370/165. *(handwritten: ← from what?)*

Install RJE Terminals-University of North Florid Teaching Hospital, Administrative Computing Center.

Begin Conversion to 370/165.

November 1972: Transfer Systems Staff, Registrar's Office to Regional Data Center.

January 1973: Convert Tape Drives and Communication Devices at Regional Center.

University of North Florida - Fully Operational on 370/165.

Detail Plan for Release of 360/50 and Reorganiza of Administrative Computing Center to Administra Terminal Center including Tape Library.

February 1973: Registrar's Office, University of Florida-Fully Operational on 370/165.

Second RJE Terminal to Hospital.

March 1973: Release of 360/30 at Teaching Hospital. Teachin Hospital completely operational on 370/165.

Second RJE Terminal - Administrative Terminal Center.

July 1, 1973: Release 360/50. *(handwritten: — ex-admin ?)*

Regional Data Center Completely Operational.

Financial Plan

	1972-73	1973-74	1974-
Cash Balance	$ 238,000		
Income:			
State Allocation	558,000	$ 700,000	$ 700,0'
Regional Center	197,000		
University of North Florida	50,000*	65,000*	85,0'
General Income	600,000	610,000	620,0'
State Salary	130,160	140,160	150,1'
Hospital		135,000**	135,0(
University of Florida Administration		235,000**	235,0'
Total Income	$1,773,160	$1,885,000	$1,925,1'

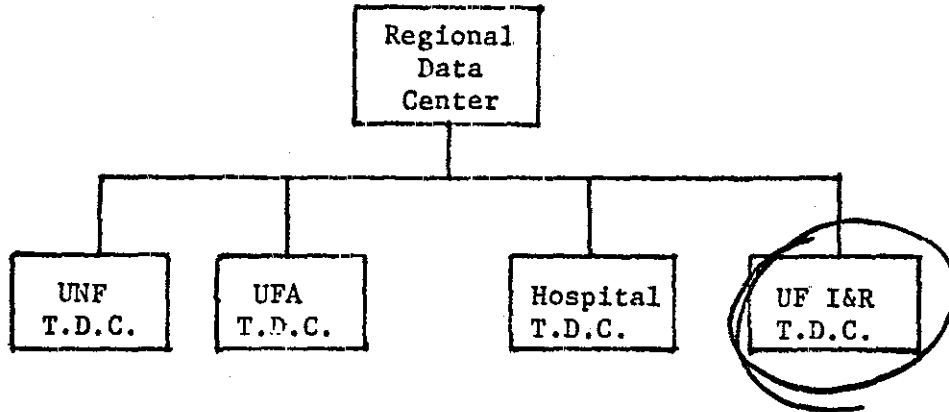| **Expenditures:**			
Hardware	$1,155,816	$1,416,511	$1,399,1C
Personnel	440,000	470,000	520,0C
Operation Expenses	160,000	100,000	120,0C
Total Expenditures	$1,755,816	$1,986,511	$2,039,1'
(Deficit 201,114)	$ 14,344	$ -101,511	$ -113,9'

*Amount shown or actual usage, whichever is greater at
 rates set by the Policy Board.

**Represents cost of present level of service.

Staffing Plan

The Committee recommends an organization as detailed below:

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                    │  Regional   │
                    │    Data     │
                    │   Center    │
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   │   UNF   │ │   UFA   │      │ Hospital │  │  UF I&R  │
   │ T.D.C.  │ │ T.D.C.  │      │  T.D.C.  │  │  T.D.C.  │
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status??   *RɛI*

In the original plan approved by the Chancellor and the Department of General Services, the Regional Data Center and three Terminal Data Centers were proposed.

We recommend that because of the scope of I & R activities at the University of Florida, that those personnel in the University of Florida Research Center involved in support of I & R activities at the University of Florida be placed in a separate unit to be designated the University of Florida I & R Terminal Data Center. This Terminal Data Center will not operate hardware; will correspond to the I & R support sections found in the TDC at the University of North Florida in function.

We recommend the following staffing for the Regional Data Center:
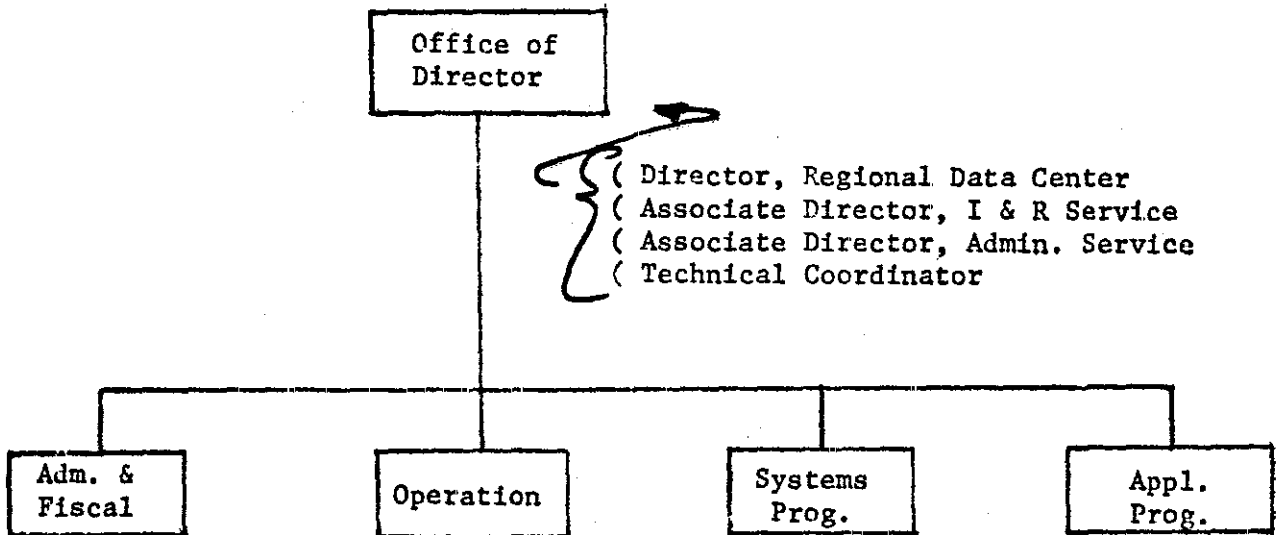
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        │  Office of  │
        │  Director   │
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(Director, Regional Data Center
(Associate Director, I & R Service
(Associate Director, Admin. Service
(Technical Coordinator

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│  Adm. & │ │ Operation │  │ Systems │   │  Appl.  │
│  Fiscal │ │           │  │  Prog.  │   │  Prog.  │
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Adm. & Fiscal	Operation	Systems / Appl. Prog.
Accountant II	Operation Mgr. II	Comp. Research Spec.
Fiscal Assistant II	Operation Supervisor	Systems Analyst Supvr.
Staff Assistant I	Computer Opr. III (5)	Systems Analyst II (2)
Editorial Assistant	Computer Opr. II (3)	Systems Analyst I (2)
Clerk Typist II	Computer Opr. I	Programmer I (2)
	Keypunch Supervisor I	
	Keypunch Operator (3)	

The applications programming section we would staff initially with the systems and programming staff currently in the budget of the Registrar's Office leaving in their place a Systems Coordinator and providing that priority one for this group would be movement of the workload of the registrar to the Regional Center.

The University of Florida I & R Staff would consist of those personnel required to support the I & R function and would include the academic personnel (Instructors, Associate Professor, Scientific Programmer) assigned to the Research Center currently plus support personnel.

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                    ┌──────────────────┐
                    │  Asst. Director of│
                    │   Data Systems    │
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      ┌──────────┐    ┌──────────┐       ┌──────────┐
      │   Data   │    │   Inst.  │       │ Research │
      │   Prep.  │    │  Support │       │ Support  │
      └──────────┘    └──────────┘       └──────────┘
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Keypunch Supvr.   Associate Professor   Scientific Programmer (2)
Keypunch Operator (3)   Instructor (2)   Programmer II (2)
                                                      Programmer I (5)
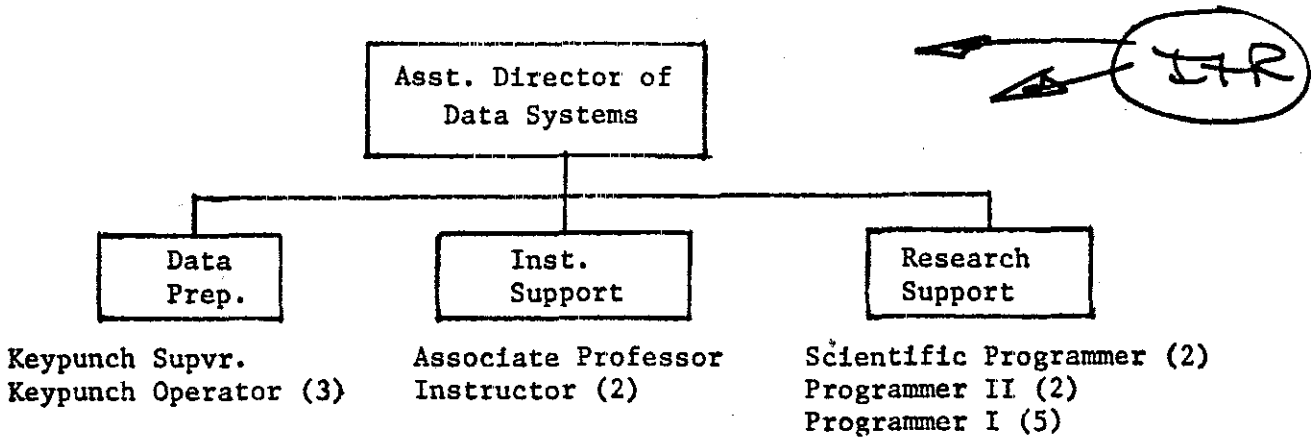
We recommend reassigning the Medical Center Research unit currently in the Research Computing Center to the Hospital Terminal Center. This includes Associate Professor, Programmer I, Programmer II, Operator I.

We recommend acceptance by the Policy Board of the staffing patterns of the University of North Florida and Hospital Terminal Data Centers.

We discussed the staffing of the University of Florida Administrative Terminal Center and recommend that the reorganization of this unit be deferred until they have gained experience with terminal operations. We recommend January of 1973 for completion of the necessary planning for phasing out the 360/50 and reorganization of the Administrative Data Center into a terminal data center. We recommend that for planning purposes, July 1 be considered the termination date for 360/50 operations.

General

As noted in Dr. Solomon's report, space is a critical problem at the Regional Center. The Center has space for the 370/165 but the location of the tape library will be the first major space problem.

We recommend space in the near vicinity of the Regional Center for the establishment of the Regional Center Library, preferably in Bryant Hall because cost of high speed data transfer increases with distance to CPU.

We recommend consolidation of all tape libraries into a single library under control of the Regional Center, that the establishment and staffing be planned and implemented by the Administrative Computing Center and turned over to the Regional Center.

In addition, the Committee feels very strongly that the proposal which deals with an associate director for Administrative Services, Accountant II, Operation Manager II, and the Technical Coordinator be treated as a package, as we feel that these positions are a mandatory requirement or we would re-structure the entire plan.

In discussing the draft of this report with the Research Computer Committee, the question of peakload priorities was discussed and it was recommended that the mechanism for coordination of this problem be established immediately so that we could be ready when the problem arises. One approach would be to reconstitute the technical committee, broader based (include I & R function) to recommend a peakload priority policy. This augmented technical committee could also recommend to the director or policy board the specific services to be available at the regional data center.

The Research Computer Advisory Committee also recommends that we reexamine the tape library question and be a little more creative or imaginative in the solution of this problem.

SUMMARY

UNIVERSITY OF NORTH FLORIDA

ANNUAL COMPUTER COST

HARDWARE (includes data sets and circuits)

Data 100	$ 20,272	two?
Burroughs	44,319	
Punched card equipment	3,888	
I & R Lab	28,800	
CPU Time	50,000	
	147,279	
SALARIES	120,749	
TOTAL	$ 268,028	

I & R Lab

The University of North Florida

```
        ┌──────────────┐
        │     IBM      │
        │              │
        │   370/165    │
        └──────────────┘
                ↕
        ┌──────────────┐
        │              │
        │     2703     │
        │    (3705)    │
        │              │
        └──────────────┘
                ↕
        ┌──────────────┐
        │  16 Shared   │
        │  Line Data   │
        │     Sets     │
        └──────────────┘
```

4 Data Circuits

NOTE: The Feasibility of
using a multiplex
device instead of
multiple data circuits
is currently being
explored.

```
        ┌──────────────┐
        │  16 Shared   │
        │  Line Data   │
        │     Sets     │
        └──────────────┘
                ↕
        ┌──────────────┐
        │   16 IBM     │
        │ 2741 Terminals│
        └──────────────┘
```

COST:
Annual Total quoted cost...
                 $28,800

Administrative Terminal
The University of North Florida

IBM
370/165

2703
(3705)

Bell
208-A2
Data Set

30 FX 22809
Data Circuit

Bell
208-A2
Data Set

Operator
Console

Burroughs
DC 1203

Communications
Interface

Administrative
Users

475 CPM
Reader

100 CPM
Punch

700 LPM
Printer

Data Coll.
Mag Tape

Data Coll.
Mag Tape
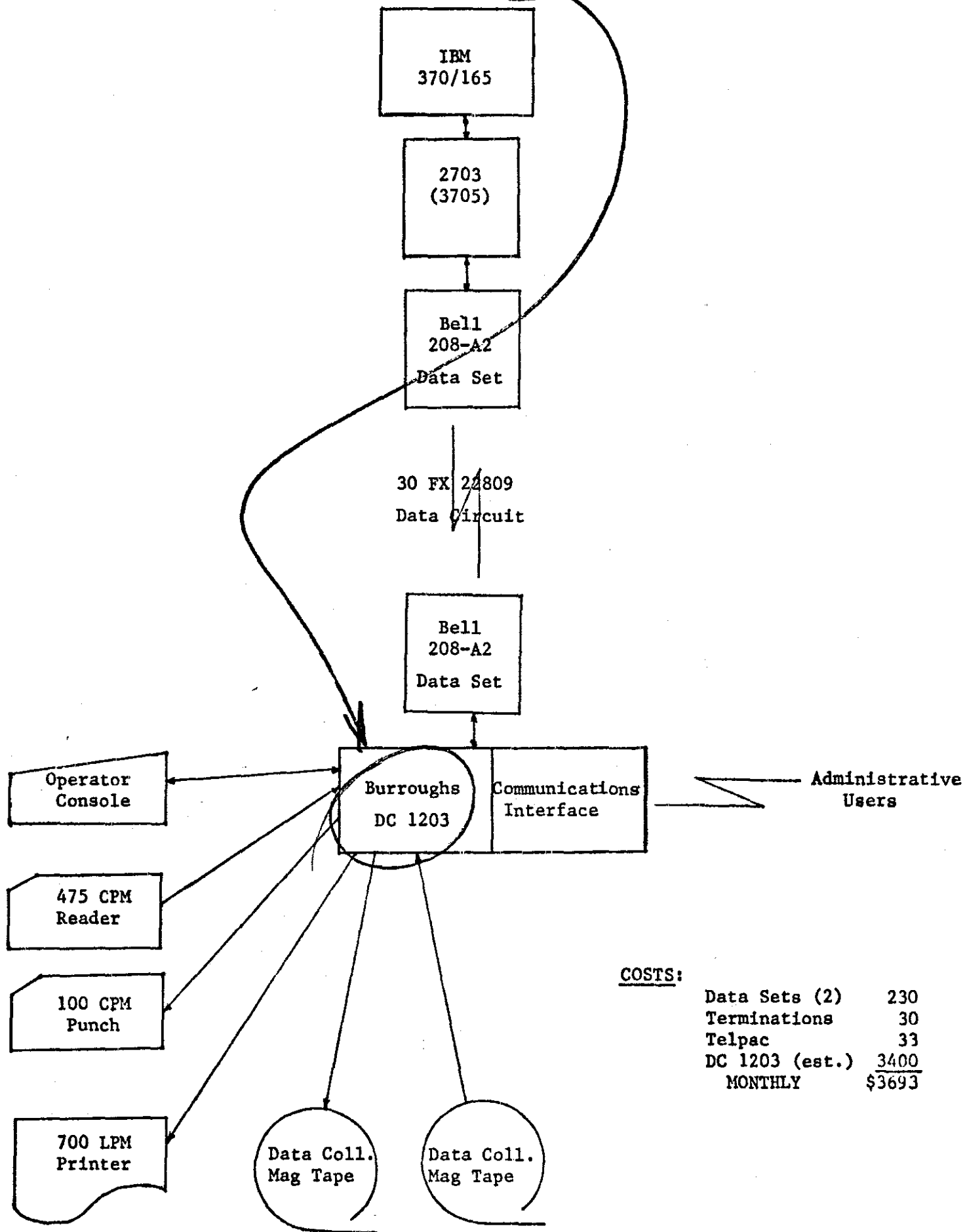
COSTS:

Data Sets (2)	230
Terminations	30
Telpac	33
DC 1203 (est.)	3400
MONTHLY	$3693

FOREIGN EXCHANGE VOICE CIRCUIT

The University of North Florida

```
┌─────────────────┐
│                 │
│  Gainesville    │
│                 │
│   Exchange      │
│                 │
└─────────────────┘
```

30 GD 2628

Voice Circuit

```
┌─────────────────┐
│                 │
│ Jacksonville    │
│   Exchange      │
│                 │
│                 │
└─────────────────┘

┌─────────────────┐
│                 │
│    U.N.F.       │
│                 │
│                 │
└─────────────────┘
```

COSTS:

	Line	15
	Term.	30
	Telpac	33
Monthly.........		$78

I & R Terminal
The University of North Florida

⑥

IBM
370/165

2703
(3705)

ICC
4600/48
Data Set

Data Circuit
30 FX 2280X

ICC
4600/48
Data Set

240 CPM
Reader

Model 78
Data 100

(Emulates 360/20 Sub Model 5)

300 LPM
Printer

Operator
Console
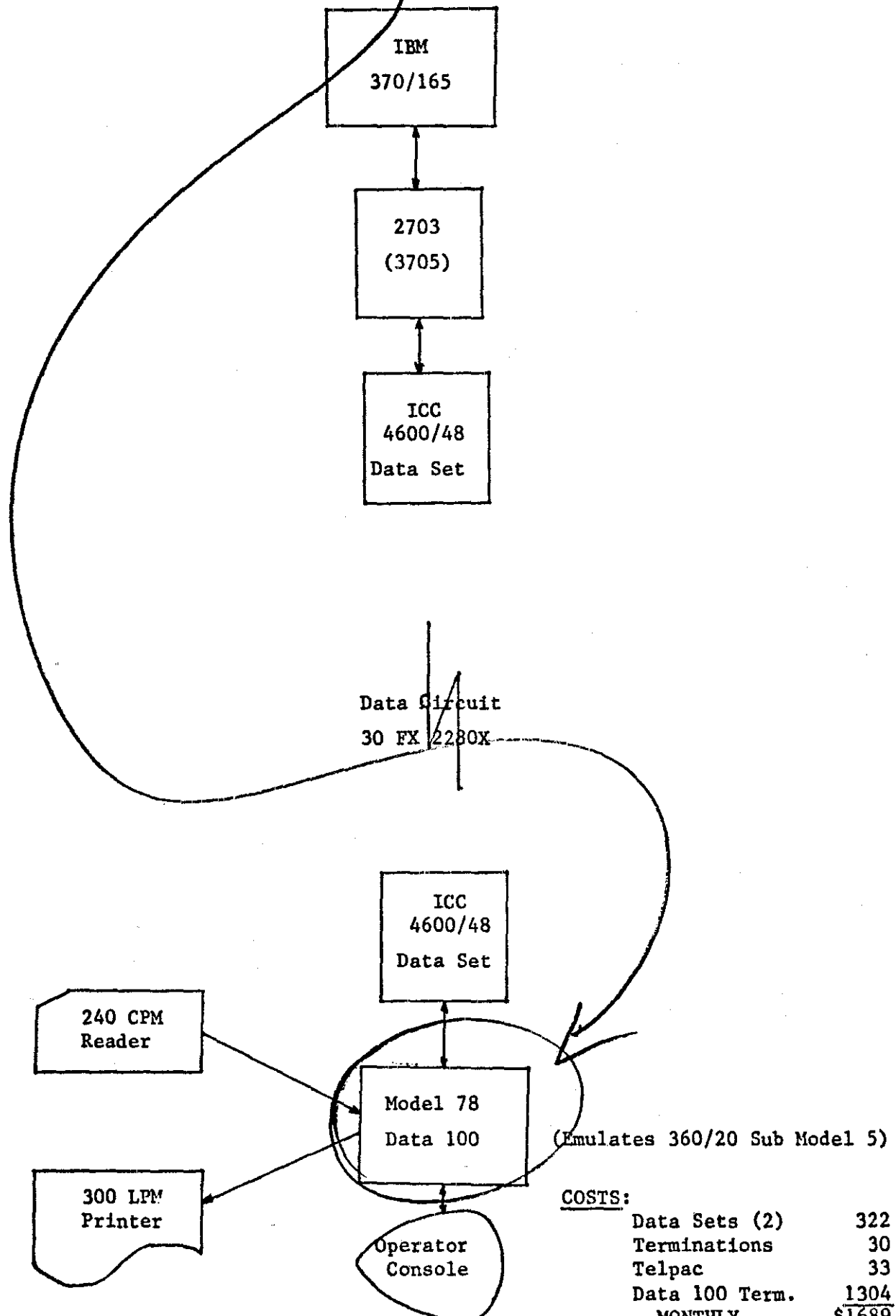
COSTS:

Data Sets (2)	322
Terminations	30
Telpac	33
Data 100 Term.	1304
MONTHLY........	$1689

Positions

The University of North Florida

```
                    ┌──────────────┐
                    │   Computer   │
                    │    Center    │   $15,000
                    │   Director   │
                    │      09      │
                    └──────────────┘
                           │
                    ┌──────────────┐
                    │   Computer   │
                    │   Systems    │   $12,000
                    │ Coordinator  │
                    │      98      │
                    └──────────────┘
```

| Computer Systems Analyst Supv.   99 | $11,108 | Computer Systems Analyst Supv.   290 | $11,108 |

| Computer Systems Analyst II 44 | Computer Systems Analyst II 100 | $11,278 | Computer Systems Analyst II 291 | Computer Systems Analyst II 292 |

$9,166

$10,398 $10,398

| Computer Programmer I 47 | $7,788 |

| Keypunch Operator 48 | Computer Operator II 307 | $6,536 |

$4,802

| Keypunch Operator TBA | Computer Operator I 45 | $6,365 |

$4,802

Annual Total Costs: $120,749

VI-11

SHANDS TEACHING HOSPITAL

CURRENT HARDWARE

360/30

(1)	2030F PROCESSING UNIT	$ 4009
(5)	2311 DISK DRIVE	2280
(2)	2401-5 MAGNETIC TAPE UNIT	872
(1)	2540 READER/PUNCH	568
(1)	2804 TAPE CONTROL	864
(1)	2821 I/O CONTROL	848
(1)	2841 DISK CONTROL	448
(1)	1403-N1 PRINTER	786
(1)	1051 CONSOLE	117
(45)	1316 DISK PACKS	571
		$ 11,363/MO

UNIT RECORD

(2)	029 CARD PUNCH	$ 139
(1)	088 COLLATOR	363
(7)	129 DATA RECORDER	1008
(1)	557 INTERPRETER	162
* (1)	557 INTERPRETER)	
* (1)	083 SORTER) Maintenance	175
* (1)	514 REPRODUCER)	
		$ 1,847/MO

* - Purchased Equipment

```
                              ┌──────────────┐
                              │    Data      │
                              │  Systems     │
                              │ Director II  │
                              └──────────────┘
                  ┌──────────────────┴─────────────────────┐
          ┌──────────────┐                          ┌──────────────┐
          │  Computer    │                          │Computer      │
          │ Operations   │                          │Systems and   │
          │ Manager I    │                          │Programming   │
          └──────────────┘                          │Manager       │
                                                     └──────────────┘
     ┌────────────┬────────────┐              ┌──────────────┬──────────────┐
┌──────────┐ ┌──────────┐ ┌──────────┐   ┌──────────┐  ┌──────────┐
│ Computer │ │EDP Control│ │  K. P.  │   │ Computer │  │Computer  │
│Operator III│ │  Clerk   │ │ Supv. II │   │Programmer II│ │Systems   │
│   (2)    │ └──────────┘ └──────────┘   │   (4)    │  │Analyst II │
└──────────┘                              └──────────┘  │   (2)    │
     │                          │                       └──────────┘
┌──────────┐                ┌──────────┐
│ Computer │                │  K. P.   │
│Operator II│                │ Supv. I  │
│   (2)    │                │   (2)    │
└──────────┘                └──────────┘
                                 │
                            ┌──────────┐
                            │  K. P.   │
                            │ Operator │
                            │   (7)    │
                            └──────────┘
```

UNIVERSITY OF FLORIDA COMPUTING CENTER
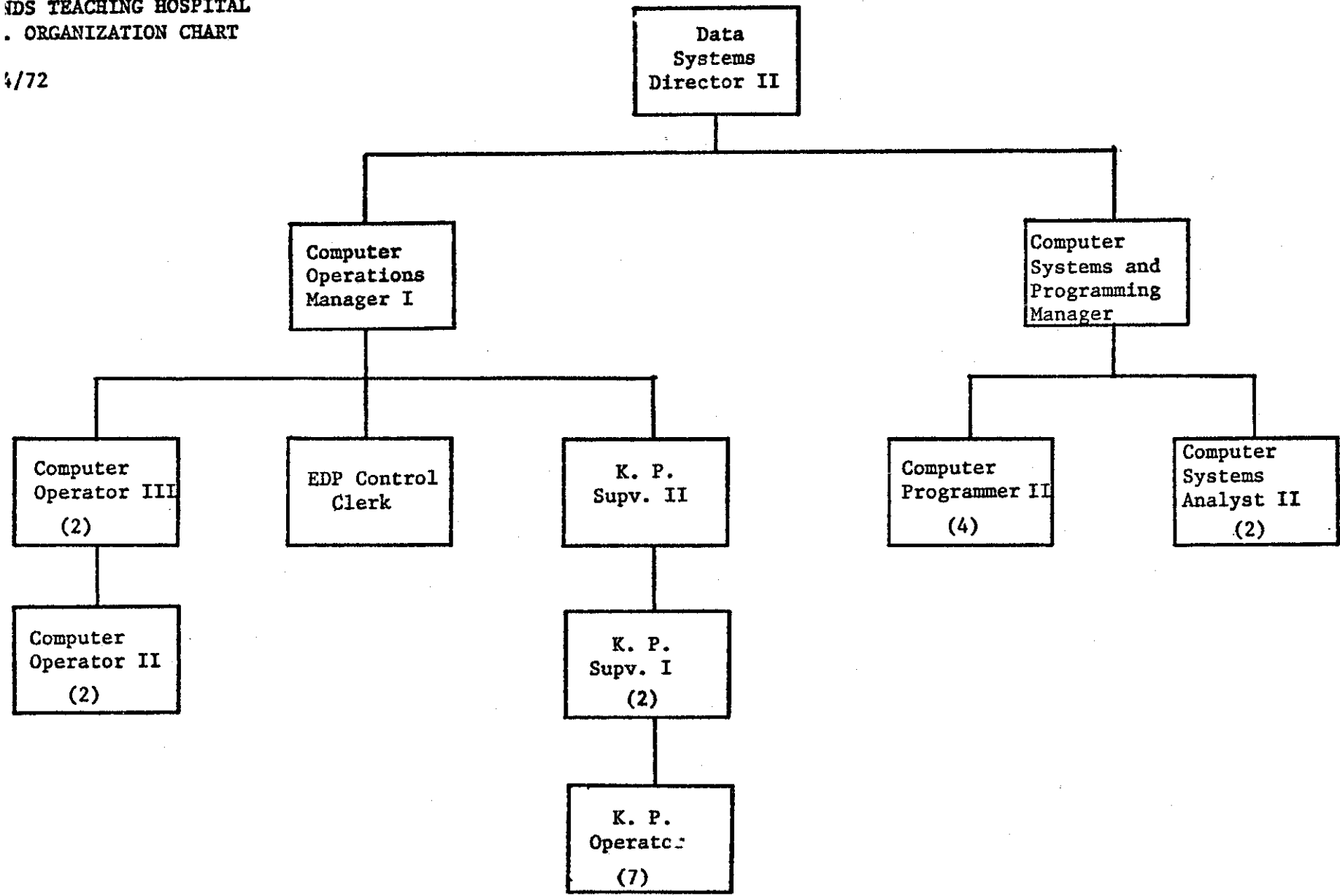
DETAIL CHART

VICE PRESIDENT

PRES. ADV. COMMITTEE

DIRECTOR 2251 S001

FISCAL ASST. 1402 S003

ASST. DIR. DATA SYS. 1401 A009 S004

EDITORIAL ASST. W126 * A054

(MED. CENTER)
ASSOC. PROF. 2873 S007
SECTY II W15 * A042
- SCNTFC. PROG. 9954 * A034
- CMPTR. OPR. II W18 * A044
- CMPTR. PROG. II 9154 * A038
- CMPTR. PROG. II W1 A050

(ADMINISTRATION & KEYPUNCH OPNS)
STAFF ASST. I 8020 A008
- KEYPUNCH SUP 1403 S005
- EDP CONTROL CLK 9961 A030
- SECTY II 9300 A028
- EDP CONTROL CLK 9960 * A029
- KEYPUNCH OPR 1404 S006
- KEYPUNCH OPR 9098 A026
- KEYPUNCH OPR. 8028 * A027
- KEYPUNCH OPR. 9951 A041

(EDUCATION)
ASSOC. PROF. 1400 S002
- ASSOC. PROF. 9303 * A001
- ASSOC. PROF. 9304 * A002
- ASSOC. PROF. 9305 * A003
- INSTRUCTOR A535 S010
- INSTRUCTOR 2147 S008

(COMPUTER OPERATIONS)
CMPTR. OPRS. SUP 9100 A015
CMPTR. OPR. III 9093 * A018
- CMPTR. OPR III 3 ** A016
- CMPTR. OPR. III 9101 A019
- CMPTR. OPR. III 9301 A020
- CMPTR. OPR III 8025 A017
- CMPTR. OPR III 2994 S009
- CMPTR. OPR. II 8027 A022
- CMPTR. OPR. II 8024 A021
- CMPTR. OPR. II 9094 * A023
- CMPTR. OPR. II W19 * A045
- CMPTR. OPR. II W17 * A043
- CMPTR. OPR. II 9302 A024
- CMPTR. OPR. I 8026 A025

(SYSTEMS)
CMPTR. SYS. ANA. SR 8021 * A010
CMPTR. RES. SPEC. 9103 A006
- CMPTR. PROG. I W130 A058
- CMPTR. PROG. I W10 A047
- CMPTR. SYS. ANA. II 9959 * A033
- CMPTR. SYS. ANA. II 9957 A031
- CMPTR. SYS. A...
- CMPTR. SYS. ANA I *

(APPLICATIONS)
SCNTFC. PROG. 9975 A037
CMPTR. RES. SPEC. 9104 * A007
- CMPTR. PROG. II 8773 * A013
- CMPTR. PROG. II W4 A053
- CMPTR. PROG. II W2 * A051
- SCNTFC. PROG. 9955 * A035
- SCNTFC. PRO. 3956 * A...
- CMPTR. PROG. I 9952 A039
- CMPTR. PROG. I W12 A049
- CMPTR. PROG. I 9953 A040
- CMPTR. PROG. I W11 A048
- CMPTR. PROG W9 A...
- CMPTR. PROG. I W127 A055
- CMPTR. PROG. I W128 A056
- CMPTR. PRO. W129 A...

(RESEARCH CONSULTING)
CMPTR. RES. SPEC 8770 * A005
CMPTR. RES. SPEC. 9102 * A004
- CMPTR. PROG. II 8022 * A012
- CMPTR. PROG. II 8772 A014
- SCNTFC. PROG 8771 A011
- CMPTR. SYS. ANA. II 9958 * A032
- CMPTR. PROG N W3 * A052

S nnn = STATE ITEM NO.
A nnn = AUXILIARY ITEM NO.
* = UNFILLED POSITION
- = OPER. III MAY SUPERVISE ANY OPER. II AS SHIFTS CONTINUALLY CHANGE, DUE TO COVERING 7 DAYS, PERIODS OF ILLNESS, SCHEDULING VACATIONS, AND LENGTHENING OF SHIFT HOURS AS WORK LOAD INCREASES.

exists per se??
where?

Positions on current organizational chart, with legislative number, title and present salary.

Leg. #	Item #	Title	Salary	
8023	A016	Comp. Opr III	$ 9,715	Central
8024	A021	Comp. Opr II	8,007	Central
W2	A051	Prog. II	9,409	Central
W4	A053	Prog. II	9,830	Central
8026	A025	Opr. I	5,552	Med
9961	A030	EDP Control Clk	6,310	Local
8772	A014	Prog. II	9,830	Central
9098	A026	Keypunch	5,291	Local
9300	A028	Secty II	5,859	Central
9953	A040	Prog. I	7,778	Local
9101	A019	Opr. III	8,901	Central
W127	A055	Prog. I	7,822	Outside
9952	A039	Prog. I	8,362	Med
W10	A047	Prog. I	7,822	Central
W130	A058	Prog. I	7,788	Central
9951	A041	Keypunch	4,483	Local
8027	A022	Opr. II	7,500	Central
9301	A020	Opr. III	9,258	Central
8771	A011	Scient. Prog.	13,767	Central
8025	A017	Opr. III	9,528	Central
8020	A008	Staff Asst. I	8,937	Central
W1	A050	Prog. II	9,983	Med
W12	A049	Prog. I	8,705	Local
9302	A024	Opr. II	6,867	Central
W3	A052	Prog. II	9,406	Central
9100	A015	Comp. Opr. Sup.	10,601	Central
9975	A037	Scient. Prog.	11,058	Local
9103	A006	Comp. Res. Spec.	14,500	Central
1401	{ A009	Asst. Dir.Data Sys.	6,113	Local
	{ S004		10,410	
2994	S009	Opr. III	9,039	Central
1404	S006	Keypunch	4,802	Outside
1402	S003	Fiscal Asst. II	7,861	Central
1403	S005	Keypunch Sup.	6,061	Local
2873	S007	Assoc. Prof.	22,770	Med
2147	S008	Instructor	10,140	Local
A535	S010	Instructor	8,966	Local
2251	S001	Director	26,922	Central

355,953

Item numbers beginning with A are auxiliary, S for state.
All state positions are currently I & R.

ADMINISTRATIVE COMPUTING CENTER
F 320-500-CI
hment 3

ADMINISTRATIVE COMPUTING CENTER (OPERATIONAL)
ORGANIZATIONAL CHART
7/1/72

DIRECTOR 24

SECRETARY III 67 — CLERK TYPIST II 56

PROJECT DEVELOPMENT

ASST DIR DATA SYS A816

OPERATIONS

SYS COR (TBA)

SYS COR A703

SYS COR (TBA)

PRODUCTION SCHEDULING

CMPTR OP MGR II 2613

CMP SYS ANAL II 127

USER (DIRECT)

CMPTR OP MGR I 174

CMP SYS ANAL II A302

CMP SYS ANAL II (TBA)

SYSTEMS MAINTENANCE AND PROGRAMMING

CMPTR. OPR III 2112

DATA CONVERSION   PRODUCTION CONTROL

COMPUTER OPERATIONS

L SUPPORT

MGR SYS & PROGRAM 30

KEYPUNCH SPV II 58

CMPTR OPRS SPV 53

SHIFT A

SHIFT B

SHIFT C

R

KEYPUNCH OPR 64

CMPTR OPR III 2549

CMPTR OPR III 204

CMPTR OP III 2540

S I

CMP SYS ANAL II (2) 2623 2548

CMP PRGMR II (5) 2443 A301 50 A818 52

KEYPUNCH SPV I 61

KEYPUNCH SPV I 137

DATA PROC COR 2704 (2) 182

CMPTR OPR. II 55

CMPTR OPR II 2550

CMPTR OP II 54

CMP SYS ANAL I 51

KEYPUNCH OPR (4) 63 68 65 2113

KEYPUNCH OPR (3) 62 66 59

CMPTR OPR II 60

CMPTR OPR I (2) 197 2541

CMPTR OPR. II 57

STUDENT

UNIVERSITY OF FLORIDA

Administrative Computer Center

Hardware Costs

		MAC	1972-73	1973-74	1974-75
360/50	CPU	$ 8,222	$ 98,667		
	Maintenance	680	8,160		
	Transmission Control	1,406			
	Terminal	361			
	Tape Control	675			
	Tape Drive	2,565			
	C/R	256			
	C/R/P	568			
	Printer	666			
	Printer	708			
	Print Tr.	77			
	Control Unit	1,336			
	Disk Control	1,184			
	Disk Control	2,700			
	Console	50			
	TOTAL	$12,552	$150,624		
			$257,451		

UNIVERSITY OF FLORIDA

ADMINISTRATIVE COMPUTING CENTER

Purchase of Equipment Other Than CPU

	Description	Serial No.	Deposit Cost	Time Payments	Total Cost	Monthly Maintenan
6/70	Keypunch 029	17,542			$ 2,456	$ 29
7/66	Collator 088	18,216	$ 2,039	$ 12,185	14,225	99
7/66	Sorter 083	15,599	357	2,111	2,468	37
7/66	Reproducer 519	18,098			2,450	78
7/66	Interpreter 557	17,395	719	4,296	5,015	89
	TOTAL		$ 3,115	$ 18,592	$26,614	$332

UNIVERSITY OF FLORIDA

Administrative Computing Center

Keypunch Equipment

Date Acquired	Description	Serial No.	Monthly Rental	Discount	Monthly Net
1-72	Keypunch/Verifier 129	37543	$ 160	$16	$ 144
1-72	Keypunch/Verifier 129	37544	160	16	144
1-72	Keypunch/Verifier 129	37545	160	16	144
1-72	Keypunch/Verifier 129	37546	160	16	144
1-72	Keypunch/Verifier 129	37547	160	16	144
1-72	Keypunch/Verifier 129	37548	160	16	144
1-72	Keypunch/Verifier 129	34165	160	16	144
	Keypunch 029	17540	89	17	71
	TOTAL		$1,209	$129	$1,079

Research Computer Costs

		Monthly Rental	1972-73 Cost	1973-74 Cost	1974-75 Cost
Components Removed					
2065	CPU	$10,737			
2365	Processor Storage	25,886			
2314	DASD	4,200			
2314	DASD	3,996			
2316	Disks	108			
2860	Selector Channel	3,116	$ 76,168		
Components to Purchase					
2841	2311 and DASD (1 Mo.)	456	456		
2841	Ctl Unit (Printer) (1 Mo.)	928	928		
2870	MPX Channel (2½ Mos.)	1,756	4,390		
2311	Disk (1 Mo.)	456	456		
Replace January 1973					
2703	Trans Ctl Unit (6 Mos.)	3,921)	26,280		
2711	Line Adapter (6 Mos.)	459)			
2401-1	Tape Drive (5 Mos.)	276)			
2401-2	Tape Drive	1,512)			
2803	Tape Control	1,098)	14,430		
Rental and Remain					
2501	Card Reader	280			
2540	Reader/Punch	568			
1403-N1	Printer	708			
1416	Train Cartridge	78			
1416	Train Cartridge	78	20,544	$ 20,544	$ 20,544
370/165					
	Lease Purchase		741,381	934,510	897,957
	Maintenance		26,650	107,957	129,201
	Additional 3330			14,040	28,080
January 1973 - Tape and Controller					
	Tape Rental		20,195	34,632	34,632
	3705	3,921	23,526	47,052	56,917
	1800 - Hospital		36,000	36,000	10,000
	2922 - Hospital	1,436	14,360	17,232	17,232
	2922 - Adm. Comp. Ctr.	1,436	14,360	17,232	17,232

Research Computer Costs, Cont'd

	Monthly Rental	1972-73 Cost	1973-74 Cost	1974-75 Cost
360/20 - Hospital	$ 2,484	$ 12,420	$ 29,808	$ 29,808
360/20 - Adm. Comp. Ctr.	2,484	9,936	29,808	29,808
Modems		8,000	8,000	8,000
Terminals		86,000	86,000	86,000
1401 - Maintenance	590	7,080	7,080	7,080
EAM Equipment	563	6,756	6,756	6,756
Data Preparation Equip.	1,655	19,860	19,860	19,860
TOTAL	$75,186	$1,170,176	$1,416,511	$1,399,107

Summary of Hardware Expense

	1972-73	1973-74	1974-75
Regional Center	$1,170,176	$1,416,511	$1,399,107
Teaching Hospital	136,356		
Administrative Center	256,511		
TOTAL	$1,563,043	$1,416,511	$1,399,107

UNIVERSITY OF FLORIDA TERMINALS

To provide 500 LPM Printer, 1000 LPM Printer, 500 CPM Card Reader, 1000 CPM Card Reader, 300 CPM Card Punch.

2922	MAC
2922-1 Controller	$ 695
2922-2 Printer (500 LPM)	575
2922-3 Card Reader	120
	$1,390
2152 Console Adapter	74
2152 Console	131
	$1,595

360/20	MAC
2020 C6 (8K)	$1,278
1403 N1 (1000 LPM) Printer	743
1416 Train Cartridge	87
2501 A2 (1000 CPM) Card Reader	229
2520 A3 (300 CPM) Card Punch	423
	$2,760

The Structure of a Regional Data Center
to Serve
Florida Technological University and the University of South Florida

Objectives

To provide a uniform, workable and acceptable organizational structure
for administrative data processing and instructional and research computing
activities at Florida Technological University (FTU) and the University of
South Florida (USF) within the foreseeable financial resources available to
the two universities. Requirements to be satisfied include:

1) The processing of all administrative data for FTU and USF. Where
   practical, common statewide software systems will be developed and
   implemented as rapidly as possible, with only minor variations per-
   mitted and these only where there exists a demonstrable unique need
   for variation from standard systems.

2) Where a separate instructional or research facility does not exist
   on campus:

   a. Batch instructional support (with access to computer by faculty
      and students) will be provided for extensive time periods each day.

   b. Interactive terminal support for instruction and research offering
      a conversational and computer-assisted instruction capability will
      be provided during significant time periods each day.

   c. Batch research support will be provided for "normal" research comput-
      ing needs, with provision being made for the processing of overloads
      and/or exceptional needs elsewhere.

Assumptions

1) The organization should provide for economies in staff and equipment
   expenditures.

2) The organization should conform to current Florida Statutes and policies.

3) Staffing commitments must be adequate to insure the success of each
   function.

4) The Regional Data Center will consist of resources mutually contributed
   by and available to FTU and USF in an equitable manner.

5) A policy board to develop and implement general policies and procedures
   relating to the Regional Data Center has been established. This Policy
   Board will also review policies and procedures to be used at the Terminal
   Data Centers. The Presidents of Florida Technological University and the
   University of South Florida have each appointed three representatives to
   serve as members of this Board, and the Chancellor of the State University
   System will appoint an ex-officio, non-voting member representing the
   staff of the Board of Regents. In addition, the Regional Data Center
   Director and the Terminal Data Center Director have been appointed as ex-
   officio, non-voting members of the Policy Board. FTU and USF will each
   have one vote in determining Policy Board decisions.

6) Any one of the elements of this document may be altered at any time by action of the Policy Board with the concurrence of the Presidents of Florida Technological University and the University of South Florida.

Organization

Attached are the organizational chart and functional statements designed to meet the minimal requirements of FTU and USF. The organizational chart conforms with existing Florida Statutes and State EDP policies.

1) **Universities.**
   A university served by a Regional Data Center (which may or may not be located on a "user" campus) is responsible for:

   a. Recruiting and selecting the staff for its own Terminal Data Center.

   b. Appointing representatives to serve on the Policy Board.

   c. Transmitting recommendations and inquiries from the Users Group (Advisory Committee) to the Policy Board for action.

   d. Preparing the budget for its own Terminal Data Center.

   e. All administrative matters involving its own Terminal Data Center.

   f. The day-to-day operation of its own Terminal Data Center.

   g. Transmitting priorities to the Policy Board that affect the Regional Data Center operation.

   h. Following guidelines, policies, procedures, and techniques adopted by the Policy Board for the development of systems and the operation of data processing equipment.

   i. Providing general-purpose and specialized instructional support for its own academic programs.

2) **The Chancellor of the State University System**
   The Chancellor is responsible for:

   a. Appointing a representative to meet with the Policy Board.

   b. Reviewing all budgets.

   c. Submitting all requests with appropriate recommendations to the EDP Division, Department of General Services.

   d. Coordinating the development and implementation of statewide application systems.

3) **Host University**
   If the Regional Data Center is located on a "user" campus, the Host University will, in addition to acting as a Terminal Data Center in accordance with items (a) through (i) under Universities, provide the necessary facilities to house the Regional Data Center.

4) **Policy Board**
The Policy Board is responsible for:

a. The development of overall policies and procedures governing the operation of the Regional Data Center and the Terminal Data Centers.

b. Participating in the recruitment, selection and evaluation of the Director of the Regional Data Center.

c. Insofar as possible, to equitably establish the costs to FTU and USF based on the proportionate use of the Regional Data Center's resources.

d. The review of budgets and requests for equipment and software for the Terminal Data Centers served by the Regional Data Center. After review, the Policy Board shall make recommendations to the Chancellor of the State University System.

e. The establishment of priorities for interinstitutional application systems.

f. Responding to inquiries and recommendations directed to the Regional Data Center from the Users Groups (Advisory Committees).

g. The designation of one of its members as Chairman. The chairmanship shall rotate between FTU and USF on a fiscal year basis.

h. Providing guidance to the Regional Data Center and the Terminal Data Centers regarding standards, procedures and techniques to be utilized in system design and equipment operation to assure effective support of FTU and USF within available resources.

i. Implementing within the Regional Data Center and the Terminal Data Centers a cost accounting system approved by the EDP Division, Department of General Services.

5) **Regional Data Center**
The Regional Data Center is responsible for:

a. The development of regional and statewide applications systems and programs.

b. The provision of instructional and research service, as appropriate, for the user universities (see Appendix A).

c. The operation of the hardware at the Regional Data Center (see Appendix B).

d. The maintenance of effective control of production at the Regional Data Center (see Appendix C).

e. The provision of administrative services to the Regional Data Center Director, FTU and USF.

6) **Regional Data Center Director**
The Regional Data Center Director is responsible for:
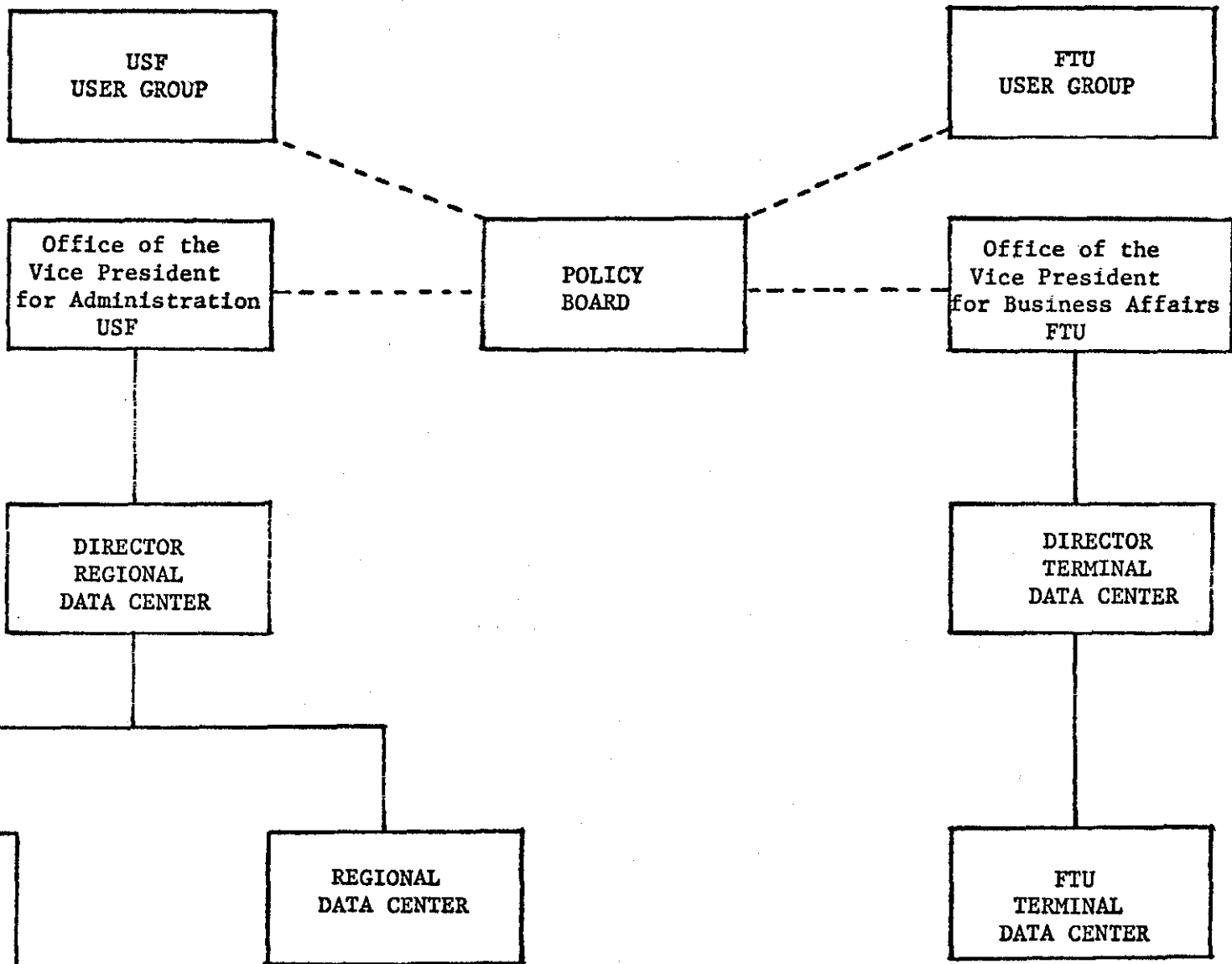
a. The coordination of computing activities between the Terminal Data Centers and the Regional Data Center.

b. Implementation of policies and procedures approved by the Policy Board.

c. Direction of the operation of the Regional Data Center.

d. The preparation of the Regional Data Center budget, subject to the approval of the Policy Board.

e. Establishment and implementation of the necessary security procedures for the Regional Data Center.

f. Recommending to the Policy Board procedures and techniques to be utilized in the development of systems and the operation of equipment at the Regional Data Center and the Terminal Data Centers to assure the efficient utilization of all data processing resources.

g. The recruitment, selection, assignment and evaluation of employees of the Regional Data Center, and the formulation of recommendations concerning any proposed change in status.

7) **Terminal Data Center**
The Terminal Data Center is responsible for:

a. The development of institutional applications systems and programs (see Appendix D).

b. The provision of instructional and research support for the university Terminal Data Center (see Appendix E).

c. The operation of the hardware at the Terminal Data Center (see Appendix F).

d. The maintenance of effective control of production at the Terminal Data Center (see Appendix G).

e. The provision of administrative services to the Terminal Data Center Director. (see Appendix H).

8) **Terminal Data Center Director**
The Terminal Data Center Director is responsible for:

a. The coordination of computing activities between the Terminal Data Center and the Regional Data Center.

b. Implementation of policies and procedures approved by the Policy Board.

c. Implementation of university-approved policies and procedures which are not inconsistent with those adopted by the Policy Board.

d. Direction of the operation of the Terminal Data Center.

e. The preparation of the Terminal Data Center budgets, subject to the approval of the appropriate university official.

f. Establishment and implementation of the necessary security procedures for the Terminal Data Center.

g. Recommending procedures and techniques to be utilized in the development of systems and the operation of equipment at the Regional Data Center and the Terminal Data Centers to assure the efficient utilization of all data processing resources.

h. The recruitment, selection, assignment and evaluation of employees of the Terminal Data Center, and the formulation of recommendations concernint any proposed change in status.

9) Users Group (Advisory Committee)

Responsibilities as outlined in Chapter 23, Florida Statutes.

10. Administrative Structure Governing
Computing Support to FTU and USF

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┌─────────────────┐                                              ┌─────────────────┐
│       USF       │                                              │       FTU       │
│   USER GROUP    │                                              │   USER GROUP    │
└─────────────────┘                                              └─────────────────┘

┌─────────────────┐          ┌─────────────────┐          ┌─────────────────┐
│  Office of the  │          │                 │          │  Office of the  │
│ Vice President  │          │     POLICY      │          │ Vice President  │
│for Administration│ ────────│     BOARD       │──────────│for Business Affairs│
│      USF        │          │                 │          │      FTU        │
└─────────────────┘          └─────────────────┘          └─────────────────┘

┌─────────────────┐                                              ┌─────────────────┐
│    DIRECTOR     │                                              │    DIRECTOR     │
│    REGIONAL     │                                              │    TERMINAL     │
│  DATA CENTER    │                                              │  DATA CENTER    │
└─────────────────┘                                              └─────────────────┘

┌─────────────────┐          ┌─────────────────┐                 ┌─────────────────┐
│      USF        │          │    REGIONAL     │                 │      FTU        │
│    TERMINAL     │          │  DATA CENTER    │                 │    TERMINAL     │
│  ATA CENTER     │          │                 │                 │  DATA CENTER    │
└─────────────────┘          └─────────────────┘                 └─────────────────┘
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APPENDIX A

Regional Systems Programming

1. The development, review, revision and documentation of systems and programs applicable to multiple institutions.

2. The generation of operating systems and the maintenance of vendor-supplied software.

3. The furnishing of advice and consultation to users of the Regional Data Center.

4. The dissemination of information concerning hardware and software capabilities of the Regional Data Center.

5. The development of a continuing education program for employees and users of the Regional Data Center.

APPENDIX B

Operations at the Regional Data Center

1. The operation of all data processing equipment at the Regional Data Center.

2. The preparation of data at the Regional Data Center.

3. The administration of equipment maintenance arrangements and the coordination of technical support by equipment contractors and maintenance personnel at the Regional Data Center.

4. The control of card, tape, paper, and supply inventories at the Regional Data Center.

APPENDIX C

Production Control at the Regional Data Center

1. The efficient scheduling of production operations to achieve optimum utilization of equipment at the Regional Data Center.

2. The monitoring, at the Regional Data Center, of input/output against quality control standards.

3. The maintenance of tape and disk libraries and effective security of libraries at the Regional Data Center.

4. The maintenance of a current library of job documentation.

APPENDIX D

Institutional Applications Systems and Programs

1. The development, review, revision and documentation of systems and programs applicable to FTU or USF.

2. The furnishing of advice and consultation to users of the Terminal Data Center.

3. The dissemination of information concerning hardware and software capabilities of the Terminal Data Center.

4. The development of a continuing education program for employees and users of the Terminal Data Center.

APPENDIX E

Institutional Instructional and Research Support

1. The provision of systems and programming support in the areas of instruction and research.

2. The furnishing of advice and consultation to the users of the Terminal Data Center.

3. The development of a continuing education program for employees and users of the Terminal Data Center.

APPENDIX F

Operations at the Terminal Data Center

1. The operation of all data processing equipment at the Terminal Data Center.

2. The preparation of data at the Terminal Data Center.

3. The administration of equipment maintenance arrangements and the coordination of technical support by equipment contractors and maintenance personnel at the Terminal Data Center.

4. The control of card, tape, paper, and supply inventories at the Terminal Data Center.

APPENDIX G

Production Control at the Terminal Data Center

1. The efficient scheduling of production operations to achieve optimum utilization of equipment at the Terminal Data Center.

2. The monitoring, at the Terminal Data Center, of input/output against quality control standards.

3. The maintenance of tape and disk libraries and effective security of libraries at the Terminal Data Center.

4. The maintenance of a current library of job documentation.

APPENDIX H

Institutional Administrative Services

1. The performance of planning and budget preparation for the Terminal Data Center.

2. The preparation of cost accounting reports and statistical analyses for the Terminal Data Center.

A HARDWARE IMPLEMENTATION TIMETABLE FOR CENTRAL FLORIDA REGIONAL
DATA CENTER, 6/5/72 to 9/30/74
PREPARED 6/5/72

6/5-6/9/72	Prepare specifications for fast core, bulk core, DASD, FTU administrative RJE terminal, 2 faster tape units, 2 slow-speed I&R terminals.
6/12-6/16/72	Release RFP's for core, bulk core, DASD, tape units, RJE's. Order selector channel, bulk core attachment from IBM.
6/19-6/23/72	Work with communications division to determine specifications for communication lines, modems, communications control unit, interactive terminal equipment.
6/26-6/30/72	Release RFP's or sole source documents for communications control unit, modems, and interactive terminal equipment. Justify acquisition of IBM Program Products - ITF, APL, CRJE, etc. Order IBM Program Products.
7/17/72	Receive vendor responses to June 16 set of RFP's (core, bulk core, DASD, tape units, RJE's).
7/21/72	Award contracts for core, bulk core, DASD, tape units, RJE's. For delivery and installation 9/1 - 9/15/72.
7/31/72	Receive vendor responses to June 30 RFP's (communications controller, modems, interactive terminals).
8/1-8/4/72	Award contracts for communications and interactive terminals.
9/1-9/15/72	Install selector channel. Install bulk core attachment. Install 256K additional fast core. Install 1 megabyte bulk storage. Install #2314-equivalent DASD. Install communications control unit and modems to service FTU 1130 system and 8 interactive terminals each campus.
9/15-9/30/72	Implement OS/MFT Version 21.6 and CRJE, APL and ITF software.
10/1/72	Initiate limited RJE I&R support for FTU, conversion of FTU administrative systems via 1130, and limited ITF/APL service to 8 interactive terminals on each campus.
11/1/72	Volume servicing of 1130 and interactive terminals is established.
11/15/72	Conversion of UFCC terminal registration system (used by FTU) completed.
12/15-12/31/72	Convert to OS/MVT. Install additional modems/lines and expand interactive terminal network with 16 additional units (8 per campus).
1/1/73	Upgrade speed of two tape units. Install high-speed RJE terminal at FTU for administrative conversion work and volume processing. Discontinue reliance by FTU on UFCC for registration or I&R support. Install 2 slow-speed RJE terminals: 1 at USF, St. Petersburg and 1 at FTU, Cocoa/Melbourne, for I&R use.

Hardware Implementation Timetable

4/1/73	Conversion of FTU administrative applications completed. Parallel operation of H-1200 and 360/65 begins for 30 day period on final group of converted systems.
5/1/73	Discontinue H-1200 computer configuration at FTU. Regional Data Center is now completely operational.
5/1/73- 9/1/73	Gather data for preparation of RFP to acquire replacement for 360/65 by 9/1/74.
7/1/73	Install second slow-speed I&R RJE terminal on each campus.
9/30/73	Release specs & RFP for replacement computer system. Install 8 additional interactive terminals, each campus for I&R support.
11/1/73	Receive vendor proposals for new computer system.
12/15/73	Complete preliminary analysis of vendor proposals for new computer system.
2/1/74	Complete benchmark testing of proposals.
2/15/74	Award contract for new computer system.
8/15/74	Install new computer system.
9/15/74	Accept as operational the new computer system. Continue parallel runs until 9/30/74.
9/30/74	Discontinue 360/65 computer system.

REGIONAL DATA CENTER STAFF

Operating Unit	Title	No. of Positions Required	No. of Positions Available from USF	No. of New Positions Required
Production Control:	Operation Mgr. I	2	1	1
	EDP Librarian	3	1	2
	EDP Control Clerk	2	-	2
Systems Programming:	Systems Coord.	2	2	-
	CSA II	2	2	-
Operations:	Operations Mgr. II	1	1	-
	Operator III	4	4	-
	Operator II	4	3	1
*Common Systems:		-	-	-
TOTAL		20	14	6**

*Resources from each institution will be assigned to this area by the Policy Board on a project basis.

**4 of these positions have been committed from the BOR Regional Data Center Reserve and the remaining 2 positions have been committed by FTU.

8/2/72

Expenditure Category	1971-72 FTU	1971-72 USF	FTU & USF Combined	1972-73 FTU	1972-73 USF	1972-73 Reg'l. Center	1972-73 TOTAL	Regional Center Salary, Expense, OPS, OCO Increment
Expense:								
Equipment Rental	$225,000	$ 393,000	$ 618,000	$ 26,000	$ 20,000	$ 860,000	$ 906,000	$288,000
Training	-0-	-0-	-0-	6,000	-0-	4,000	10,000	10,000
Other	21,000	110,000	131,000	25,000	110,000	20,000	155,000	20,000
Total Expense	246,000	503,000	749,000	57,000	130,000	884,000	1,071,000	318,000
Salaries:								
Current University Positions	216,000	545,000	761,000	240,000*	399,000*	170,000	809,000	--
New Data Center Positions (6)	-0-	-0-	-0-	--	--	35,000	35,000	35,000
OCO:	-0-	30,000	30,000	15,000	30,000	50,000	95,000	50,000
OPS:	15,000	30,000	45,000	15,000	30,000	--	45,000	-0-
TOTALS	$477,000	$1,108,000	$1,585,000	$327,000	$589,000	$1,139,000	$2,055,000	$403,000

*Increment based upon each university adding 3 new positions @ $8,000.

8/2/72

PROPOSED HARDWARE AND SOFTWARE BUDGET FOR CENTRAL REGIONAL DATA CENTER

Item	Installation Date If New	Discontinue Date If Cancelled	Net Monthly Lease Rate	1972-73 No. Months	Amount	1973-74 No. Months	Amount
360/65 at 7/1/72 Rate	--	--	$ 31,372	12.0	$376,464	12.0	$376,464
Overlap of rental of selector subchannel and #2860-1 selector channel	--	9/15/72	2,000	1.0	2,000	--	--
Add UFCC #2860-3 selector channel	8/15/72	--	1,116	10.5	11,718	12.0	13,392
Bulk core attachment (8080 feature)	8/15/72	--	100	10.5	1,050	12.0	1,200
Bulk core	9/01/72	--	8,000	10.0	120,000	12.0	144,000
Additional 256k fast core	9/01/72	--	4,000				
Add second #2314 disk unit	9/15/72	--	2,615	9.5	24,842	12.0	31,380
Upgrade speed of 2 tape units	1/01/73	--	1,400	6.0	8,400	12.0	16,800
Transmission control unit	9/15/72	--	3,200	9.5	30,400	12.0	38,400
Communications lines - phase I	9/15/72	--	600	9.5	5,700	12.0	7,200
Communications lines - phase II	1/01/73	--	1,200	6.0	7,200	12.0	14,400
High-speed RJE terminal (administrative)	1/01/73	--	3,900	6.0	23,400	12.0	46,800
1130 system (use as I&R RJE terminal)	--	--	2,260	12.0	27,120	12.0	27,120
Upgrade 1130 with 600 lpm printer	9/01/72	--	625	10.0	6,250	12.0	7,500
H-1200 system (phased out by 4/30/73)	--	4/30/73	8,750	10.0	87,500	--	--
UFCC charges for FTU I&R support and registration	--	12/31/72	3,333	6.0	20,000	--	--
USF unit record equipment	--	--	690	12.0	8,280	12.0	8,280
USF keypunches, verifiers, keytapes	--	--	1,550	12.0	18,600	12.0	18,600
FTU keytapes, keypunches	--	--	2,160	12.0	25,920	12.0	25,920
4 additional keypunches (2 each university)	1/01/73	--	280	6.0	1,680	12.0	3,360
20 disc packs @ $8.00 per month	9/15/72	--	160	9.5	1,520	12.0	1,920
FTU key device overlap	3/01/73	4/30/73	1,000	2.0	2,000	--	--
2 RJE slow-speed terminals (1 per university)	1/01/73	--	1,800	6.0	10,800	12.0	21,600
2 second year slow RJE terminals @ $900	9/01/73	--	1,800	--	--	10.0	18,000
16 (Phase I) interactive terminals @ $150 per month (8 each campus)	10/01/72	--	2,400	9.0	21,600	12.0	28,800
16 (Phase II) interactive terminals	1/01/73	--	2,400	6.0	14,400	12.0	28,800
16 (Phase III) interactive terminals	10/01/73	--	2,400	--	--	9.0	21,600
APL and ITF Program Products	10/1/72	--	500	9.0	4,500	12.0	6,000
TOTALS					$861,344		$907,536

CENTRAL FLORIDA REGIONAL DATA CENTER MEMORY CONFIGURATION

512K FAST CORE

OS 80K
120K
120K
120K
60K
HASP 12K

BATCH 420K

240K

180K

1M BYTE BULK CORE

HASP 140K
TSO CTL PROG + T.S. LINK PACK AREA 120K
TSO FOREGROUND & LSQS 160K
TSO FOREGROUND & LSQS 160K
EXECUTOR 12K
HIGH SPEED BATCH MONITOR 12K
TCAM 80K
UNSPECIFIED 38K
SQS 90K
HASP READER 52K
LINK PACK AREA & MASTER SCHEDULER 160K
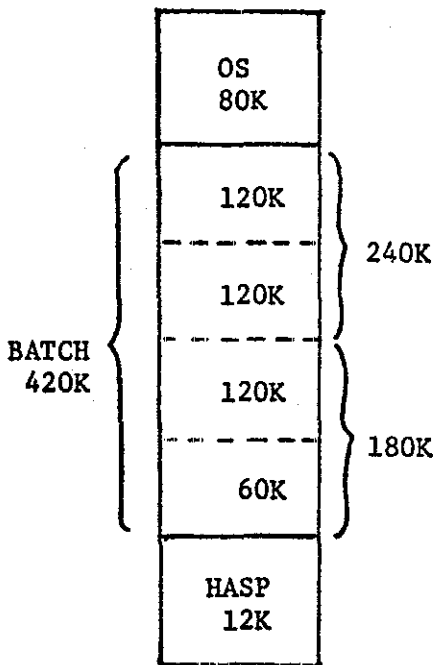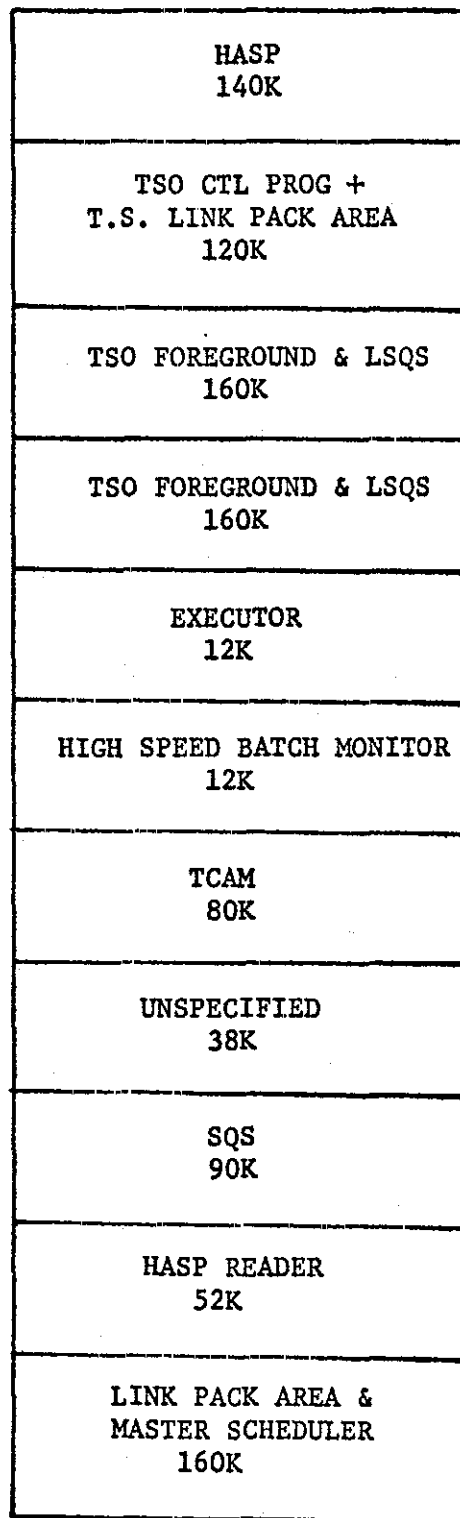
REGIONAL DATA CENTER

DISK STORAGE LAYOUT 1972-73

50M SPOOL AREA
75M OPERATING SYSTEM
50M STUDENT DATA
100M WORK SPACE
37.5M INTERACTIVE SYSTEMS
25M TEACHING & RESEARCH PROGRAMS
12.5M ADMINISTRATIVE PROGRAMS
12.5M PROCUREMENT DATA
12.5M FINANCIAL SYSTEM DATA
12.5M PERSONNEL DATA
5M WORKING CAPITAL
2M HEALTH CENTER
2M SPACE FILES
2M PHYSICAL PLANT

TOTAL = 398.5M BYTES

A Plan for the Establishment of a Regional Data Center to Support
The Florida State University, Florida A. & M. University,
The University of West Florida, and BOR Staff

Objectives

It is planned to establish the Northwest Regional Data Center (NWRDC) in order to provide adequate and necessary computer support for FSU, FAMU, UWF, and BOR staff within available financial resources. Regional computing has as its objective providing enhanced computer capabilities to each participant by realizing some economies of scale and recent advancement in the state of the computing hardware and software art. Further, and of possible greater consequence, regional computing should provide a standard hardware base and systems support base to provide economies for implementation of standard State systems and regional systems.

Services and Facilities

1) The NWRDC will provide administrative data processing services for users in accordance with policies determined by the NWRDC Policy Board, subject to provisions hereinbelow stated. Policies pertaining to the equipment and operation of the NWRDC will be established by the Policy Board.

2) Common SUS--wide and NWRDC software systems will be implemented as rapidly as they become available and usable by NWRDC. Variations from SUS-wide or regional systems will be minimized, and will be permitted only when needs are clearly demonstrable.

3) Terminal facilities and related staffing will be provided as necessary on the premises of the user (FSU, FAMU, UWF, BOR Offices). The equipment and any related maintenance agreements for these terminal facilities will be subject to the approval of the NWRDC Policy Board. The terminal facilities will be installed in buildings of the user in the location specified by the user. The terminal facility, including all persons engaged in its operation on the premises of the user, will be controlled and managed by the user. All expenditures related to the terminal facility, including those for equipment lease and/or purchase, payroll for terminal facility staff, and supplies and other expenses, will be defrayed by the user. Each participant in the NWRDC must assume the posture of a terminal regardless of his proximity to the actual mainframe. Each participant must maintain functional control over the operations personnel assigned to the terminal data centers to insure responsiveness to users and to maintain the individual goals of that particular institution.

4) Appropriate and necessary communications systems from the NWRDC to the terminal facilities will be designed, contracted for, and maintained by the NWRDC, subject to the approval of the Policy Board. Payment for the communications system and its operation will be made by the NWRDC subject to reimbursement by users; the utilization of that portion of the system and its operation that can be ascribed solely to a particular user will be billed at cost to that user; the utilization of common equipment and its operation will be billed at cost to users on the basis of benefits received in accordance with formulas to be approved by the NWRDC Policy Board.

5) Computer mainframe and peripheral equipment operations and services will be provided to users at their request by the NWRDC. Computer mainframe and peripheral equipment time and services costs will be prorated to users on the basis of time used in accordance with formulas to be approved by the NWRDC Policy Board.

6) Technical services, including operating system liaison and applications programming consultation, will be provided to users at their request by NWRDC at cost at hourly rates to be determined by the NWRDC Policy Board.

7) Administration, quality control, general user liaison, facility maintenance and occupancy and related items will be provided by the NWRDC. The cost of these items will be incorporated into an indirect cost rate or rates to be applied to the above-mentioned services rendered by NWRDC for ultimate billing to users in accordance with formulas and policies to be approved by the NWRDC Policy Board. The term cost as used in preceeding sections accordingly comprehends both direct and indirect costs. (Since the NWRDC is to be located on the FSU campus, utilities, building maintenance, custodial and groundskeeping services and related services will be provided by the FSU Physical Plant Division at reasonable rates to be agreed upon by that Division and the Policy Board. All space occupied by the NWRDC will not be included in the FSU space inventory.)

8) Systems analysis and programming services will be provided by users utilizin user personnel. All costs related to such personnel of a given user will be defrayed by that user. In addition, systems management and systems development services, including certain systems analysis and programming, will be provided by the staff of the Management Information System Office of the State University System; it is not contemplated that charges will be made for such services. Common SUS-wide software systems will be developed by personnel committed to that purpose by the Management Information System Office of the SUS and by the several users in accordance with agreements and schedules reached by that Office and the users. A systems analyst/ programming staff should be included in the NWRDC to allow resource sharing during conversion and to insure an orderly effort toward systems standardization. Each participant should also be allowed, however, to maintain a systems analyst/programming staff of its own at a level that insures responsiveness to their users but that does not conflict with the objectives of systems standardization or initial conversion.

9) Keypunch and other data origination devices and functions will be maintained by users, who will be responsible for the accuracy and timeliness of input data to NWRDC and who will furnish accurate control totals for all numeric input data to NWRDC. When numeric input data and control totals are not in agreement, they will be returned by NWRDC to the user for correction and resubmission, with corresponding adjustments in output due dates. The cost of keypunch and other data origination devices and functions of a user will be borne by the user. Certain keypunch devices and functions may be maintained by NWRDC, at its option, and corresponding services may be provided to users at their request by NWRDC, at direct plus indirect cost rates approved by the Policy Board.

10) The operations staff of the NWRDC must at all times be responsible for the processing related to all users and must not be routinely assigned tasks related to the preparation of data or dissemination of reports for any one participant.

Assumptions

This plan is based upon certain underlying assumptions that will be important to its success:

1) The Northwest Regional Data Center is to be established in accordance with a mandate from the State of Florida. The primary motivation for the development of this regional data center in conjunction with other regional data centers is to provide a reasonably uniform and adequate level of computer support across the entire spectrum of administrative computer service required by the universities at the least possible cost. There will be one time conversion and startup costs that will necessarily be unique to the establishment of the NWRDC. The operating costs of the NWRDC, including terminal facilities and communications services, initially and perhaps for several years will be greater than would have been the aggregate costs of the several users had they proceeded with independent facilities. In the longer term, it is possible that the regional data center approach will afford economies compared with independent facilities, but that has not been demonstrated and is not assured. The regional data center concept provides an opportunity to provide needed computer support to users. That will not be automatic; the success of the data center will be dependent upon excellent management and cooperation among users.

2) Equipment and staffing will be specified in a manner believed to be adequate to facilitate successful implementation and operation of the NWRDC.

Governance of the Northwest Regional Data Center

The NWRDC will be under the policy control of the NWRDC Policy Board, which will establish and promulgate policies for the NWRDC. The Board will meet periodical as it shall determine. The Board will be comprised of two voting representatives, or their designees who may vote in their stead, of each participating university (contemplated to be The Florida State University, Florida A. & M. University, and The University of West Florida) and one representative of the Board of Regents staff (Chancellor's Office). The NWRDC Policy Board will communicate policies in writing promptly upon their adoption to the Director of the Northwest Regional Data Center, who will be responsible for their implementation and for the management of the center The Policy Board will be responsible for the selection and employment of the Northwest Regional Data Center Director, who will be the chief executive officer responsib to the Policy Board for the operation of the center.

No official business shall be transacted by the Policy Board unless each univers is represented by a voting representative at the meeting in which the business is con sidered and unless a quorum is present. A quorum is at least a majority of voting representatives.

The functions of the NWRDC Policy Board include the following:

1) Approval of equipment configuration for data center, communications network and terminal facilities.

2) Approval of annual operating budget for NWRDC and amendments thereto.

3) Approval of service and priority algorithms for NWRDC.

4) Approval of regional of SUS-wide software systems to be implemented and
    operated by NWRDC.

5) Approval of cost rates for computer mainframe and peripheral equipment
    time and services, communications network, professional services including
    operating system liaison and applications programming, and any other ser-
    vices provided by NWRDC, provided, however, that such rates will result in
    full cost recovery during each fiscal year.

6) Approval of indirect cost rate or rates applicable to item 5) immediately
    above, provided, however, that such rates will result in full indirect
    cost recovery during each fiscal year.

7) Approval of administrative data processing services, other than keypunch
    and professional services, to be provided by other than NWRDC or the
    user. This item requires unanimous approval of all voting members present
    at the meeting.

    The foregoing approvals require an affirmative majority vote of the voting
members present at the meeting, except as specifically noted.

NWRDC Resources

    All administrative data processing services for users (FSU, FAMU, UWF, and
BOR staff) will be obtained and furnished as provided herein. Users will not
obtain data processing services other than keypunch and professional services out-
side their own organizations from other than NWRDC except by express written consent
of the NWRDC Policy Board. All administrative data processing resources pertaining
to NWRDC users will be allocated initially to users; resources will flow to NWRDC
as data processing services are provided by NWRDC and billed to users. ADP resource:
allocated to users for the purpose of obtaining services from NWRDC will be separate.
identified and accounted for and will be usable for that purpose only. The flow of
resources to the NWRDC will thus be assured.

General Policy Guidelines

1) Each user pledges the necessary manpower and effort to the conversion of
    its administrative data processing systems to the standard regional or
    SUS-wide systems as they are developed and ready for implementation.
    This process may require the assignment of effort from the accounting
    and registrar's offices on an accelerated basis.

2) Present computer personnel will be given careful consideration for each
    opportunity. Current employees need not be concerned about employment,
    although in certain instances a change in location may be required. In
    general, all staff members will be retained and provided with equal or
    expanded opportunities.

3) Each user will appoint a computer users group to meet on a regular basis to provide users input to terminal center management, the NWRDC Policy Board, and the NWRDC Director.

4) Computer services related to instruction and research may be processed through the NWRDC on a time available basis and with an understandably low priority to encourage the processing of this material on those machines dedicated to those services.

Chester F. Blakemore, Executive Director

February 16, 1972

Please address reply to: EDP Division
B-10 Larson Bldg.

Dr. Stephen C. O'Connell
President
University of Florida
Gainesville, Florida

Dear Dr. O'Connell:

Attached is a proposed structure for the Regional
Data Centers to support the State Universities together
with functional statements. I would appreciate your
comments regarding this structure no later than
February 28, 1972, in order that they may be incorporated
into the final operational plan. I will consider no
response to be general concurrence with the proposal.

If you have any questions regarding this matter or
if there are any items that you would like to discuss,
please don't hesitate to call me.

With kindest personal regards, I am

Sincerely,

William H. Corbett
Director, EDP Division

WHC/j

Attachment

A PROPOSAL FOR STRUCTURING
REGIONAL DATA CENTERS TO SUPPORT
THE STATE UNIVERSITIES OF FLORIDA

I. Objectives:

To provide a uniform, workable and acceptable organizational

structure for State Universities of Florida within

foreseeable financial resources of the State University

System. Requirements to be satisfied include:

(1) All administrative data processing for the State

University System. Where practical, Common Statewide

Software Systems to be developed and implemented as

rapidly as possible with only minor variations

permitted and these only where there exists a

demonstrable unique need for variation from standard

systems.

(2) Where a separate research facility does not exist on

campus (all institutions except Florida State University

and the University of Florida).

   a) Batch Instructional Support with access to computer by

      faculty and students being provided for extensive time

      periods each day.

   b) Interactive terminal support for instruction and Research

      during significant time periods each day offering a

      conversation and computer assisted instruction capability.

c) Batch research support for "normal" research computing needs. Provision to be made for overload or exceptional need to be processed by the Research Computing Centers at the University of Florida or Florida State University.

II. Assumptions:

A. Proposed organization should provide for long term economies in staff and equipment expenditures.

B. The organization should conform to current Florida Statutes and policies.

C. Staffing commitments are to be adequate to insure the success of each function.

D. The regional data center organization will be separate from either of the participating universities, but responsible equitably to their individual needs.

E. A policy board will be formed for each Regional Data Center to be composed of equal membership from the participating universities and will be the governing board of each Regional Data Center.

1. UNIVERSITY OR UNIVERSITIES

University or Universities served by one or more terminals which may include Host if served by a terminal or terminals connected to the Regional Data Center Computer.

a. Responsible for recruiting and selecting the staff for the Terminal Data Center with approval of the policy board.

b. Shall appoint representatives to serve on the Policy Board.

c. Shall transmit recommendations and inquiries from the Users Group (Advisory Committee) to the Policy Board for action.

d. Responsible for budget preparation for the Terminal Center.

e. Responsible for all administrative matters involving the Terminal Center.

f. Responsible for the day-to-day operation of the Terminal Data Centers.

g. Responsible for transmitting priorities to the Policy Board that affect the Regional Data Center operation.

h. Implement within the Terminal Center a cost accounting system approved by the EDP Division, Department of General Services.

i. Responsible for following guidelines, policies, procedures, and techniques passed by the policy board for the development of systems and operation of data processing equipment.

III. Proposed Organization:

Attached is the proposed organizational chart and
functional statements designed to meet the minimal
requirements of the stated objectives of this study.
This proposed organizational chart conforms with existing
Florida Statutes and State EDP policies.

IV. Recommendations

It is recommended that comments regarding the proposed
organizational structure and its accompanying functional
statement be forwarded to the EDP Division no later than
February 28, 1972.

2. BOARD OF REGENTS

a. Responsible for appointing a representative(s) to serve on the Policy Board.

b. Responsible for review of all budgets.

c. Responsible for submitting all requests with appropriate recommendations to the EDP Division, Department of General Services.

d. Coordinate development and implementation of statewide application systems.

3. HOST UNIVERSITY

a. Responsible for recruiting and selecting the staff for the Terminal Data Center with the approval of the policy board.

b. Shall appoint representatives to serve on the Policy Board.

c. Shall transmit recommendations and inquiries from the Users Group (Advisory Committee) to the Policy Board for action.

d. Responsible for budget preparation for the Terminal Center.

e. Responsible for all administrative matters involving the Terminal Center.

f. Responsible for the day-to-day operation of the Terminal Data Centers.

g. Responsible for transmitting priorities to the Policy Board that affect the Regional Data Center operation.

3. HOST UNIVERSITY (Continued)

h. Implement within the Terminal Center a cost accounting
   system approved by the EDP Division, Department of
   General Services.

i. Provide the necessary facilities to house a Regional
   Data Center.

j. Responsible for following guidelines, policies, procedures
   and techniques passed by the policy board for the
   development of systems and the operation of data processing
   equipment.

4. POLICY BOARD

a. Responsible for recruitment and selection of a Director
   for the Regional Data Center.

b. Responsible for the direct control of the Regional Data
   Center including appointment of personnel, recommendations
   for hardware, software, and all other matters.

c. Responsible for review of budgets, recommendations for
   personnel appointments, and recommendations for equipment
   and software for the Terminal Centers. After review,
   the Policy Board shall make recommendations to the
   appropriate authorities.

d. Establish priorities for institutional application systems.

e. Responsible for development of overall policies governing
   the operation of the Regional Data Center under the
   guidelines published by the EDP Division, Department of
   General Services.

4. POLICY BOARD (Continued)

f. Shall respond to inquiries and recommendations directed
to the Regional Data Center from the Users Group
(Advisory Committee).

g. May designate one of its members to whom the Regional
Data Center Director may report to on day-to-day matters.

h. Responsible for providing guidance to the Regional
Data Center and the Terminal Data Centers regarding
standards, procedures and techniques to be utilized in
system design and equipment operations to assure
effective support of all institutions within available
resources.

5. REGIONAL DATA CENTER DIRECTOR

a. Coordinate computing activities between Terminal and
Regional Data Center.

b. Implement policies approved by the Policy Board.

c. Direct the operation of the Regional Data Center.

d. Responsible for preparation of budgets.

e. Establish the necessary security for the Regional
Data Center.

f. Responsible for recommending to the policy board
procedures and techniques to be utilized in the
development of systems and operation of equipment at
the Regional Data Center and the Terminal Centers to
assure the efficient utilization of all data processing
resources.

6. OPERATIONS

    a. Responsible for directing the timely operations of all data processing equipment at the regional site to include supporting unit record and keypunch eqippment.

    b. Responsible for all data preparation at the regional site. This includes keypunching, keytaping, etc.

    c. Responsible for organizing the shifts necessary to operate the equipment located at the regional site.

    d. Assures adequate production capacity in terms of equipment capability and staffing to meet current and projected demands for processing services.

    e. Administers equipment maintenance arrangements, training programs, and technical support by equipment contractors and maintenance personnel.

    f. Responsible for the control of work production, scheduling of equipment, and control of card, tape, paper and supply inventories.

    g. Contributes to recommendations for leasing, purchasing or disposition of equipment and the procurement of technical services.

    h. Responsible for evaluation of the performance of assigned personnel and participating in the hiring of new employees for authorized positions in the function.

7. PRODUCTION CONTROL

   a. Assure efficient scheduling and production operations.

   b. Monitor input/output against quality control standards.

   c. Assure optimum utilization of equipment.

   d. Maintain tape and disk libraries and effective
      security of libraries.

   e. Maintain a current library of job documentation.

   f. Keeps the data center director informed of the status
      of problem areas.

   g. Responsible for the evaluation of the job performance
      of assigned personnel. Participates in the hiring of
      new employees for authorized positions with the function.

8. REGIONAL APPLICATIONS SYSTEMS AND PROGRAMMING

   a. Develop programs and document systems applicable to
      multiple institutions subject to priorities of
      the Policy Board.

   b. Supply the necessary advice and consultation concerning
      vendor supplied software (applied technology).

   c. Responsible for effective management of systems analysis,
      design, evaluation and computer programming activities.

   d. Provides guidance and supervision to personnel engaged
      in the development of computer systems and the preparation
      of computer programs.

8. REGIONAL APPLICATIONS SYSTEMS AND PROGRAMMING (Continued)

e. Assures continuous review and revision of existing systems and programs as necessary to adjust to changing requirements and to insure the efficient and economical use of available resources.

f. Perform liaison between the center and other institutions so as to assist in the planning and direction of applications.

g. Assure effective data management and keep all users apprised of both software and hardware capabilities of the center and provide technical guidance for planning committee, staff, educational programs, etc.

h. Keeps abreast with the EDP industry improvements and trains analysts/programmers in the use of modern techniques for design and implementation of advanced computer systems.

i. Responsible for the evaluation of job performance of assigned personnel. Participates in the hiring of new employees for authorized positions within the function.

9. INSTRUCTIONAL AND RESEARCH SUPPORT
(Optional, only applicable if Regional Center is to furnish research and instructional support.)

a. Provide systems and programming support in the areas of instruction and research as directed by the Policy Board.

b. Provide advice and consultation at the level desired by the Policy Board.

c. Keeps abreast of the latest industry techniques used for instructional and research purposes.

9. INSTRUCTIONAL AND RESEARCH SUPPORT (Continued)

    d. Responsible for the evaluation of the job performance
of assigned personnel. Participates in the hiring
of new employees for authorized positions within
the function.

10. TERMINAL CENTER

    a. Responsible for efficient operation and management of
Terminal Data Center using guidelines, techniques and
procedures passed by the Policy Board.

    b. Coordinate with the Regional Data Center Director
concerning anticipated Regional Data Center support
requirements.

    c. Coordinate with the users on all data processing matters.

    d. Responsible for hiring new personnel with the approval
of the policy board.

    e. Responsible for security at the terminal site.

11. INSTITUTIONAL OPERATIONS

    a. Responsible for all data preparation at the institution.
This includes keypunching, keytaping, etc.

    b. Responsible for organizing the shifts necessary to
operate the equipment located at the institutions.

    c. Responsible for the operation of the RJE terminal.

    d. Responsible for production control and scheduling at the
terminal site.

    e. Responsible for following guidelines and procedures for
the operation of equipment passed by the Policy Board.

12. <u>INSTITUTIONAL APPLICATIONS SYSTEMS AND PROGRAMMING GROUP</u>

    a. Responsible for the design and development of unique institutional oriented applications.

    b. Responsible for user coordination and consultation within that institution.

    c. Responsible for programming maintenance of existing institutional systems.

    d. Responsible for following guidelines, techniques and policies established by the policy board for the development of administrative systems.

13. <u>INSTITUTIONAL INSTRUCTION AND RESEARCH SUPPORT</u>

    a. Provide institutional computer support in the area of instruction and research.

    b. Provide advise and consultation in that area to the institutions.

    c. Responsible for following guidelines, techniques and policies established by the policy board regarding the development and implementation of instructional and research systems.

14. INSTITUTIONAL OPERATIONS

Terminal data center at the Host University which does not
have a remote terminal connected to the Regional Center.

a. Responsible for all data preparation at the institution.

b. Responsible for following guidelines and procedures
   for submission of data to the regional computer center
   as established by the policy board.

c. Responsible for the operation of the RJE Terminal
   (when applicable).

d. Responsible for production control and scheduling at
   the Terminal site.

15. USERS GROUP (ADVISORY COMMITTEE)

Responsibilities as outlined in Chapter 23, Florida Statutes.

16. ADMINISTRATIVE SERVICES

a. Responsible for planning, budget preparation and
   costing for the Regional Center under the direction
   of the Director.

b. Handle all administrative activities under the
   direction of the Regional Director.

c. Prepare statistical analysis, cost accounting reports,
   etc., as required.

UNIVERSITY OR UNIVERSITIES [1]

BOARD OF REGENTS

HOST UNIVERSITY

USERS GROUP [15]

USERS GROUP

POLICY BOARD [4]

REGIONAL DATA CENTER [5]

ADMINISTRATIVE SERVICES [16]

TERMINAL CENTER [10]

OPERATIONS [6]

PRODUCTION CONTROL [7]

REG. APPL. SYSTEMS & PROGRAMMING [8]

INSTR. & RESEARCH SUPPORT [9]

TERMINAL CENTER [10]

INST. OPERATIONS [11]

INST. APPL. S & P [12]

INST. INSTR. & RESEARCH [13]

INST. OPERATIONS [14]

INST. APPL. S & P [12]

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January 1972