

Institut Pertanian Bogor * University of Wisconsin

GRADUATE EDUCATION PROJECT



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Report No. 13

CAMMACK

REPORT ON
MANAGEMENT INFORMATION SYSTEM DEVELOPMENT
INSTITUT PERTANIAN BOGOR/UNIVERSITY OF WISCONSIN

During the visit of the short term specialists in March 1981 several recommendations were made regarding the development of an MIS for IPB. Most important of these recommendations was a suggestion that "one person be assigned administrative responsibility of overseeing the development of a comprehensive information system and the resultant analytical studies." This recommendation was elaborated on further in the Semi-annual review, August 1982. Details of a proposed organizational structure were presented in the Semi-annual review report. Focused administrative oversight remains as a key need if an integrated MIS is to be developed.

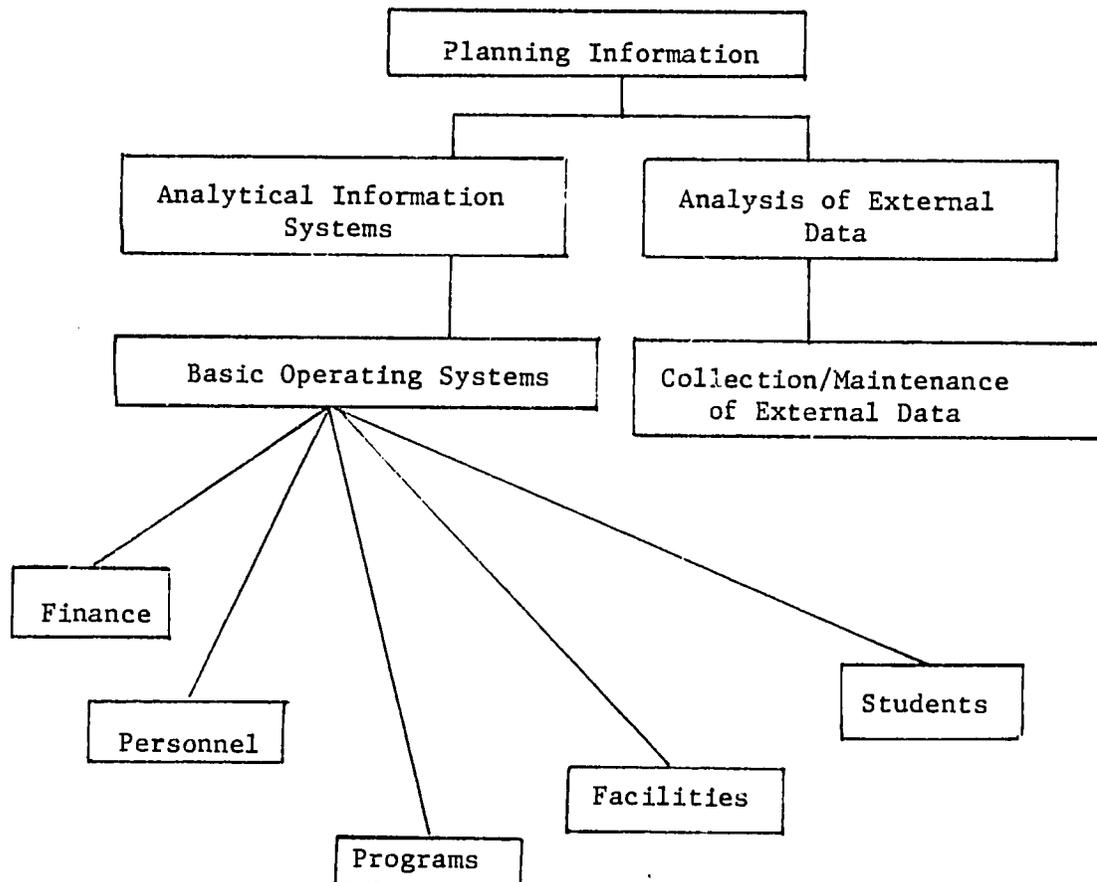
A. Basic Concepts

There are several important concepts which should be recognized in the development of a university MIS. Some of these are:

1. A systems approach should be followed in MIS development. That is, the information system be developed with a consideration of the total functions and purposes of the university.
2. The dynamic nature of a management information system must be recognized and accommodated in the system design. Flexibility should be provided whenever possible.
3. The data must have utility within the university. Data must be developed and presented in such a way that they are useful in the planning and management decisions of the university.
4. The information system must be developed within the technological constraints of the present time. For IPB the lack of a reliable telephone system for instance, severely limits the ability to develop a computing network.

5. User's roles in the design and implementation must be recognized. Information needs will be defined by the users, at whatever level, not the technicians responsible for technical implementation.
6. Centralization of information should occur at the appropriate levels of data aggregation. The policy maker must have data from the entire university. Ability to aggregate to each level of decision making becomes essential.
7. Development of an MIS should be a shared responsibility between users and the data processing staff.

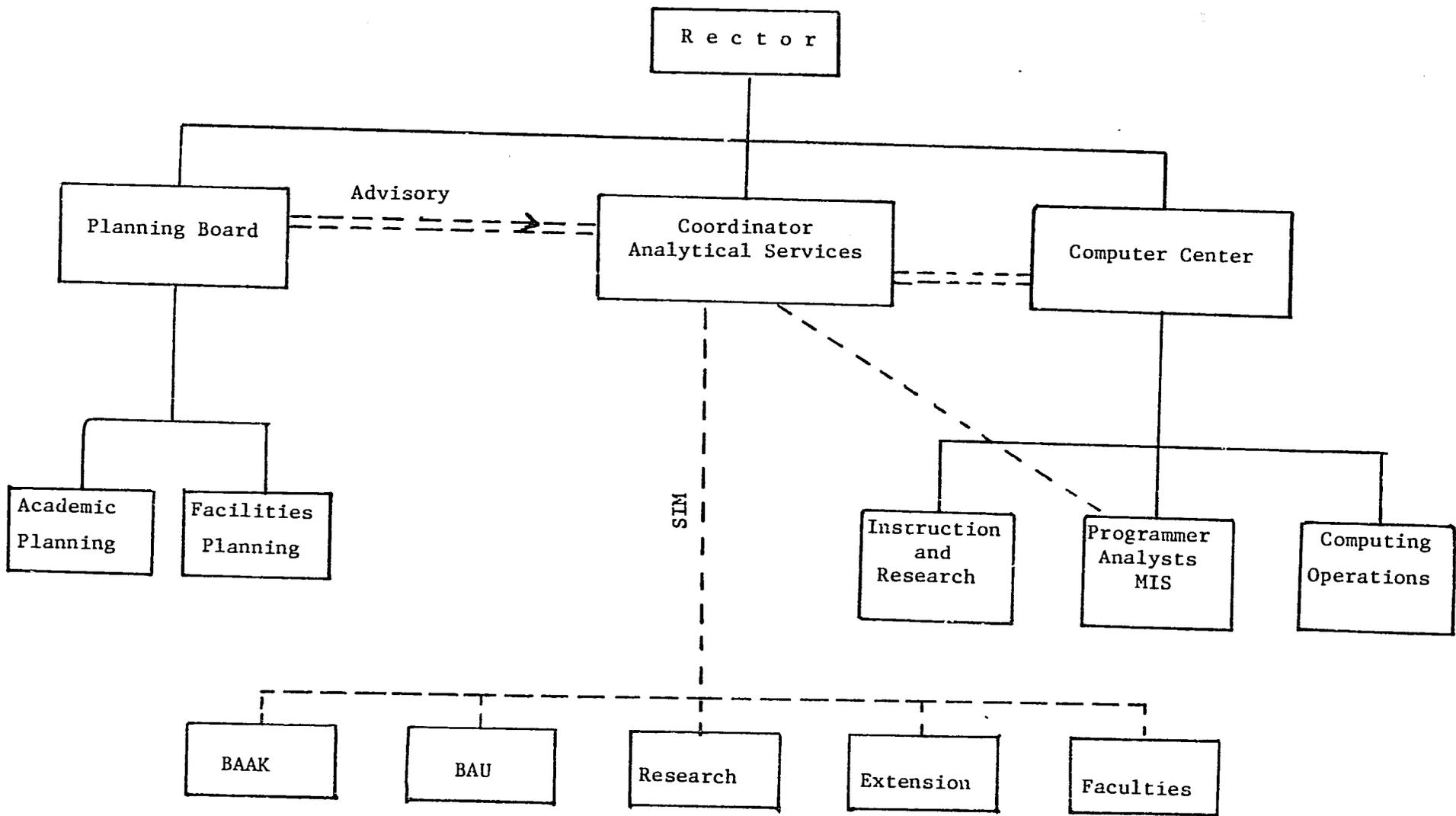
Following is a schematic of the information systems relationships in a university environment. An operating system is defined as an automated information system within an organizational unit in which there is routinely data output, data input or capture point, data transmission to other purposes, and data storage capacity.



B. Organizational Relationships

The MIS function must be structured within the organization in such a way that authority exists to affect information decisions at all levels of the university. Generally this means the individual responsible for the overall development of the MIS will report to the top echelon of the university administration. The schematic on the following page, a slight modification to that recommended in the Fourth Semi-annual Report, represents an organization structure which would facilitate the development of an MIS at IPB.

The schematic of the organizational relationships implies two essential elements; direct access and responsibility of the individual charged with the MIS development to the chief policy makers of the university and the programmer analyst resources needed to develop analyses and studies of various aspects of the university.



C. Approaches to Providing Data Processing Services

Any combination of the most appropriate configurations for providing data processing services must be evaluated according to the services to be provided. Automation of data collection and presentation can be targeted toward three different functions within a university: operational, management, and policy decisions.

Operational Systems

Computerization of the operating systems most often include the student records area and the area of financial management and control. These are two functions in which routine computations and information storage tasks are performed and thus lend themselves to automation. For example, student grade reporting can more efficiently and effectively be accomplished by the use of electronic processing rather than manual systems. In the U.S., where payrolls are handled through the issuance of checks, the payroll system is a good example of the advantages of automated systems over manual systems. The decision to automate systems of this type is made with the objective of reducing the manual effort involved and increasing the efficiency of the system. However, it is at the operational system level that data for the management and policy decision levels are most easily collected. Persons responsible for operations systems may not be sensitive to the data needs at other decision levels yet every effort should be made to collect information in the most efficient and effective manner. For example, if it is desirable to know the sex of students, this information is most easily collected at the time of admission or registration. To collect such information needs of management and policy decision makers to those responsible for the design and implementation of the operational systems is critical if the MIS is to meet the needs of the institution and is to be organized in the most cost-effective manner.

Management Systems

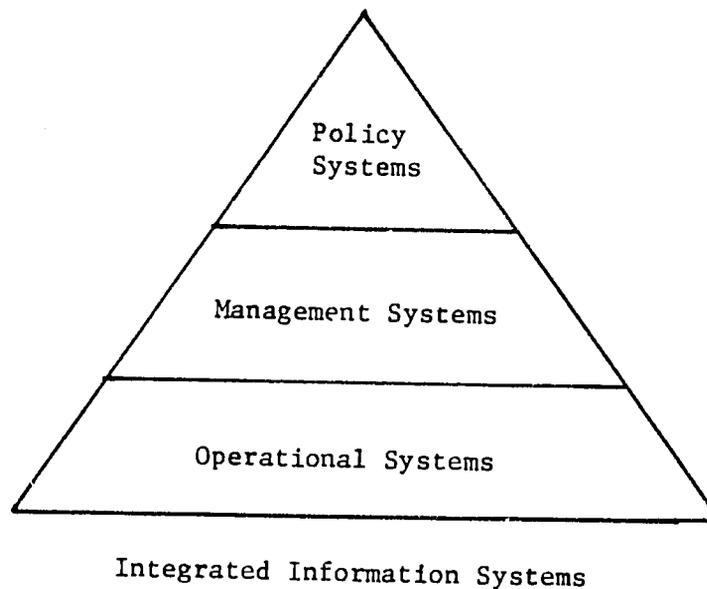
Management systems are those which assist in the control and coordination of the various organizational units of the university. It is at this level that reports are provided which assist the manager - dean,

director, etc. - in the coordination of his/her unit. An information system which serves both the operational and management levels is an integrated information system.

Policy Decision Systems

Policy decision makers are concerned with the overall direction and mission of the university. Data from both the internal information system and a variety of external sources are brought together into special studies and analyses to provide the decision maker with information useful in charting the direction of the university.

These three levels of information can best be illustrated by the following diagram. The complete set of internal data is represented by the operational level and each of the other levels are subsets of the operational system.



Computing Configuration

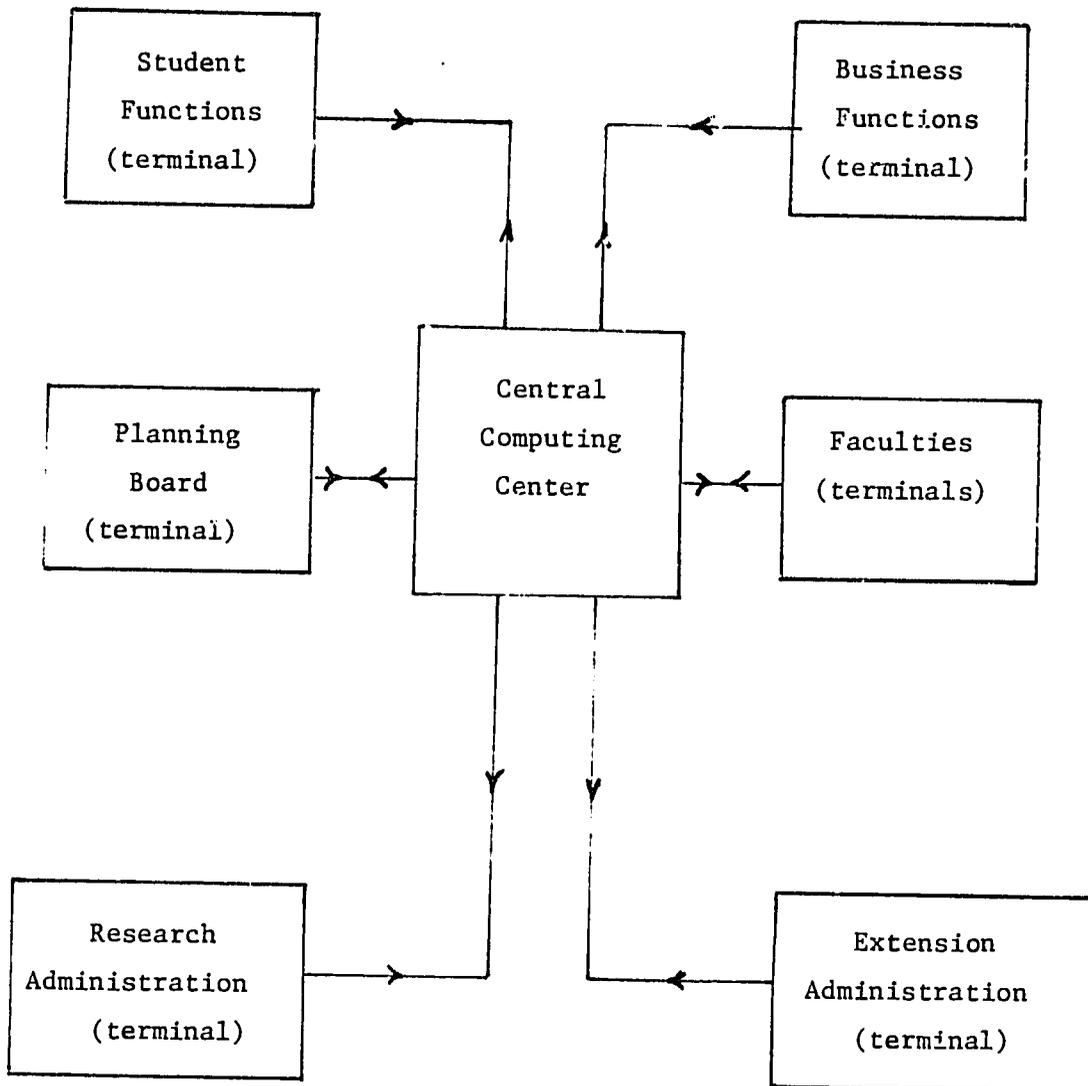
The range and configurations of computing support to the MIS are numerous. However, the particular configuration should serve the purposes of the university and should be conducive to the development of an integrated information system which serves the three levels of need described earlier.

The following schematics outline three possible configurations for providing data processing service; a- highly centralized, b- highly decentralized, and c- a networked system.

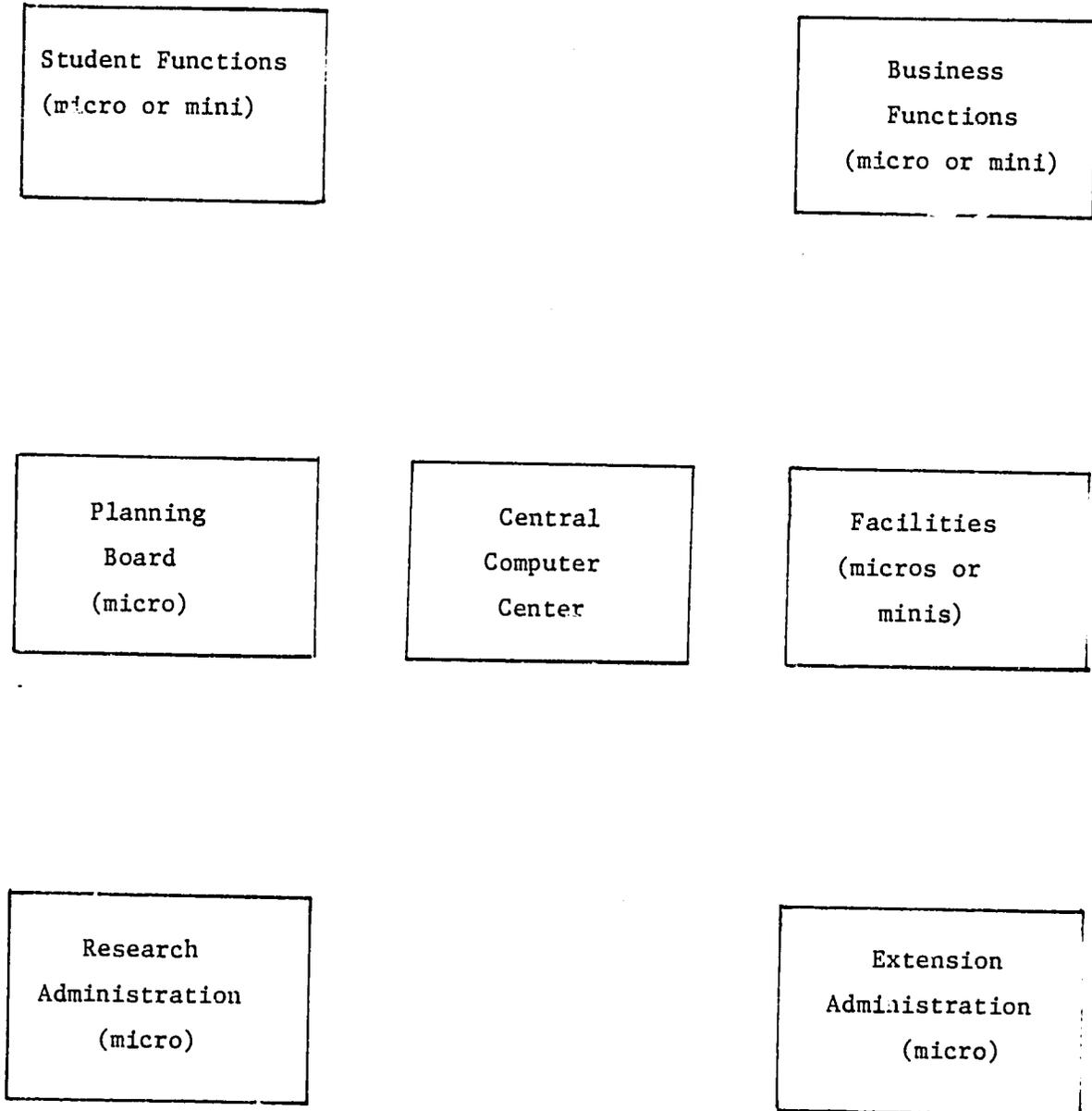
A centralized system requires hardwire connections if the system is to operate efficiently. Otherwise the operating units will not have the analytical capability required. Completely decentralized systems make the development of an integrated management information system impossible. At best, each center could produce hard copy reports but the data would not be available for automated retrieval and computation.

If uniform data specifications and file structures are imposed on all of the functional areas, a networked system would lend itself to the development of an integrated MIS. Each unit would have its own data processing capacity but at the same time the unit would provide data which can be summarized for all of IPB.

Centralized Data Processing

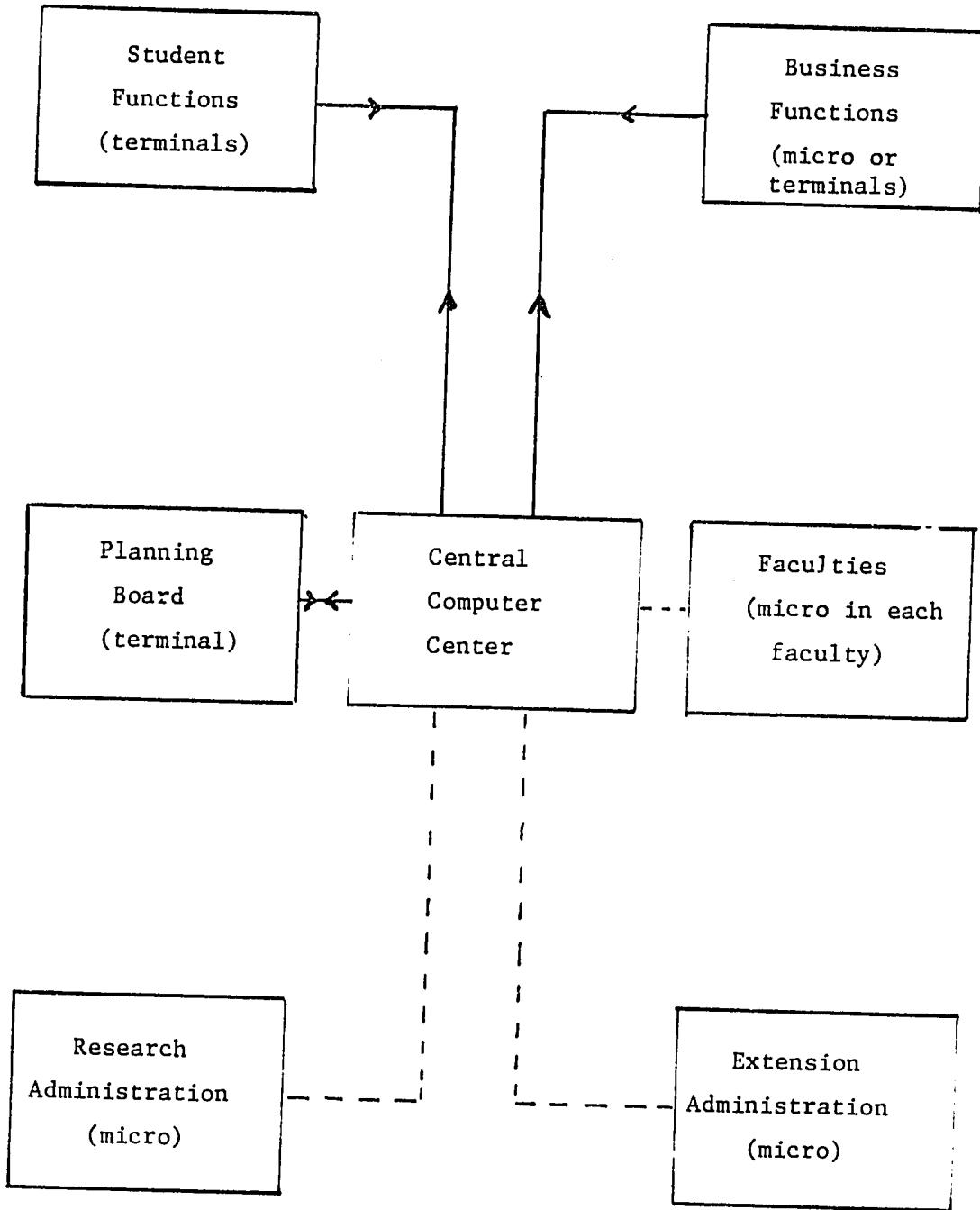


Decentralized Data Processing



Note: Computer Center may provide service to some of the functions.

Networked Data Processing



Note: - - - - - implies limited communication yet ability for data transfer each way must exist.

D. General Recommendations

Much of the work needed to identify the elements required in an MIS has already been completed. Before actual implementation begins, the Planning Board and those individuals charged with the development of the MIS should conduct a final review of the data elements to make certain the list is complete. Following is a general list of the steps which should be taken to proceed with the implementation of an MIS for the IPB administration. The steps are not necessarily listed in sequence.

1. Overall responsibility for the coordination of implementation of an MIS must be assigned. A recommendation with alternative approaches was made in the Fourth Semi-annual Report, August 1982. A discussion of a slight modification to the recommendation in the Semi-annual review report has been included earlier in this report.
2. A decision on the way in which data processing services will be provided must be made before implementation designs can be developed. If a networked data processing system is determined to be the most effective system for IPB, some standardization in the purchase of micro-computers must be implemented. Advice must be provided to the faculties and other units concerning the compatibility of particular vendor's equipment with the network to be developed for IPB.
3. The file structures and data element dictionaries must be developed and made available to each of the administrative units and faculties. An example of a file structure and data element dictionary is attached as appendix 1.
4. One or two pilot projects should be selected to test the feasibility of the MIS design and to provide staff training.
5. Specific responsibility for the analysis function must be assigned. The development of analytical reports and studies are an excellent way to assess the adequacy of the MIS.

6. Concurrent with the collection of management information, efforts should begin to develop some operational systems. The issuance of student grade reports is probably the system in which a cost-effective operational system is most easily accomplished. Other student records areas can be developed later or concurrently.
7. Programmer analysts competent in COBOL and other administrative computer languages must be available to the computer center and as advisors to units with micro-computers. An in-service training program will need to be developed.
8. A uniform coding structure needs to be developed for the organizational structure, the program structure, and the curricular structure. Ultimately a detailed coding manual must be developed (refer to SIM).
9. A working group to the information management information system should be appointed as a sounding board for the MIS staff. The groups should be widely representative of IPB. The Planning Board may serve as this group.
10. The development of an MIS for IPB is an effort involving the cooperation and work by most of the organizational units. Since the information will be collected by the faculties and administrative units, a high level of communication must be established.

E. Implementation Steps

Several activities are underway and others need to be undertaken to begin implementation of the recommendations stated earlier. Following are implementation steps which need to be completed to facilitate the development of an MIS for IPB. These steps relate more directly to a planning and decision information system than to the development of operational systems for the administrative units within IPB.

1. A coding structure for the MIS needs completion. The task is already well underway. Codes are being developed which define the organizational structure, the program structure, the curricular structure, and a systematic way to code student and staff data.
2. The data elements included in the semi-annual review of August 1982 will be reviewed and data element dictionaries developed for each of the data files.
3. File structures for student, curricular, and staff data will be developed. These file structures will then be provided to each unit providing data to the central facility.
4. Report formats and the general design of needed analytical studies must be developed.
5. Several pilot projects are already underway to develop an MIS for faculties and administrative units. These include work being done by research administration, the faculty of science and mathematics, and agricultural engineering.
6. Pilot operational systems need to be undertaken. Likely candidates are the computer generation of transcripts, a computer generated student directory, and computerization of class scheduling.
7. The development of an administrative data processing operation at the new campus at Darmaga should be considered. Appendix 2 provides a brief description of the equipment requirements to establish such a center and U.S. based costs assuming the use of IBM equipment.

APPENDIX 1

DATA ELEMENT DICTIONARY
INDEX*

ELEMENT TITLE	ELEMENT LENGTH	ELEMENT POSITION	PAGE
ALPHA DEPARTMENT	39	212	24
ALPHA DIVISION	39	173	24
ALPHA TITLE NAME	21	72	19
ALPHA UNIT NAME	39	134	23
ANNUAL RATE REDEFINES PAY RATE	5	96	21
ANNUAL SALARY	5	102	22
BARGAINING UNIT CODE	2	93	19
BASE FILE	1	54	13
BIRTHDATE	6	66	19
DIVISION	2	39	7
EEC CATEGORY	1	52	11
EEO SUBCATEGORY	1	53	13
EMPLOYEE NAME	21	11	3
FULL TIME EQUIVALENT PERCENT	3	45	9
HERITAGE CODE	1	51	12
HOURLY RATE REDEFINES PAY RATE	5	96	21
JOB CODE	1	64	18
LEAVE INDICATOR	1	55	14
LUMP SUM RATE REDEFINES PAY RATE	5	96	21
MAJOR DEPARTMENT	2	41	8

*NOTE: The data base may contain more than one record per person. There is one record for each title and department (UDD) in which an appointment is held.

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EEO DATA ELEMENT DICTIONARY INDEX (CONT'D)

ELEMENT TITLE	ELEMENT LENGTH	ELEMENT POSITION	PAGE
MARITAL STATUS	1	58	16
PAY BASIS	1	95	20
PAY RATE	5	96	20
PAYROLL CLASS CODE	2	48	10
PAYROLL CLASS CODE 1ST POSITION	1	48	11
PAYROLL CLASS CODE 2ND POSITION	1	49	11
PRIMARY RECORD INDICATOR	1	57	15
RANGE OF PAYMENT	1	61	17
SCHEDULE OF PAYMENT	1	60	17
SEX CODE	1	50	11
SOCIAL SECURITY NUMBER	9	1	3
SOCIAL SECURITY TAX INDICATOR	1	59	16
SOFT MONEY	1	63	18
SUBDEPARTMENT	2	43	9
TENURE CODE	1	56	14
TENURE PERCENTAGE	3	112	23
TITLE 4TH POSITION	1	36	5
TITLE 5TH POSITION	1	37	5
TITLE CODE	5	33	4
TITLE CODE MODIFIER	1	32	4
TITLE RANK	3	33	5
TOTAL FTE	3	109	23
UDDS CODE	7	38	6
UNIT CODE	1	38	7
VISA CODE	1	101	22

15

AA/EEO Data Element Dictionary

.....
SOCIAL SECURITY NUMBER

FORMAT: 9 DIGIT NUMERIC FIELD AT POSITION 1

DESCRIPTION:

THE SOCIAL SECURITY NUMBER IS A NINE DIGIT NUMBER ASSIGNED TO EVERY EMPLOYEE BY THE SOCIAL SECURITY ADMINISTRATION. THERE ARE TWO SETS OF DUMMY NUMBERS THAT ARE USED FOR EMPLOYEES WHO HAVE NOT FURNISHED A SOCIAL SECURITY NUMBER:

99XX - PERMANENT DUMMY NUMBER FOR EMPLOYEES WHO WILL NEVER HAVE A SOC SEC NUMBER, SUCH AS ALIENS ON A TEMPORARY VISA.

98XX - TEMPORARY DUMMY NUMBER FOR EMPLOYEES WHO WILL EVENTUALLY SUPPLY THEIR CORRECT NUMBER.

SOURCE:

FROM INFORMATION SUPPLIED ON THE W-4 FORM.

.....
EMPLOYEE NAME

FORMAT: 21 CHARACTER FIELD AT POSITION 11

DESCRIPTION:

LAST NAME, (SPACE)FIRST(SPACE)MI

SOURCE:

FROM INFORMATION SUPPLIED ON THE W-4 FORM.

.....

.....
TITLE CODE MODIFIER

FORMAT: 1 CHARACTER FIELD AT POSITION 32

DESCRIPTION:

INDICATES THE STATUS OF CIVIL SERVICE TITLES, MILWAUKEE STUDENT EMPLOYEES, OR MADISON TEACHING ASSISTANTS (TITLE RANK = '840' OR '841'). TEACHING ASSISTANT MODIFIERS A THRU E APPLY TO LIMITED TERM APPOINTMENTS, ACCORDING TO TAA AGREEMENT.

EDIT:

- | | |
|-----------------------------|---|
| FOR CLASSIFIED TITLES: | FOR MADISON TEACHING ASSISTANTS: |
| A = APPRENTICE | A = UNANTICIPATED ENROLLMENT OR STAFF FLUCTUATION |
| E = EMERGENCY | B = APPOINTED TA RESIGNED OR FAILED TO REPORT |
| L = LTE | C = COURSE CHANGE OR REDUCED NEED FOR NEXT SEMESTER |
| R = RED CIRCLE | D = APPOINTED TA ON LEAVE OF ABSENCE REQUIRES REPLACEMENT |
| S = SEASONAL | E = REASSIGNMENT OF TA'S REQUIRES VACANT POSITIONS TO BE FILLED |
| T = TRAINEE | R = REGULAR APPOINTMENT |
| P = PERMANENT | T = FIFTH YEAR APPOINTMENT |
| B = PROJECT/PROJECT | |
| C = PROJECT/PERMANENT | |
| FOR MILW STUDENT EMPLOYEES: | |
| A = ADVANCED | |
| B = BEGINNER | |
| I = INTERMEDIATE | |
| S = SPECIAL | |

SOURCE:

PERSONNEL ACTION FORM.

.....
TITLE CODE

FORMAT: 5 CHARACTER FIELD AT POSITION 33

DESCRIPTION:

STANDARD CIVIL SERVICE, OR UNIVERSITY ACCEPTED FIVE CHARACTER TITLE CODE.
FORMAT XXXXX = CLASSIFIED
XXX-X = UNCLASSIFIED

SOURCE:

PERSONNEL ACTION FORM OR BUDGET (RED BOOK) FOR PERSONS WITH ZERO SALARY.
.....

.....
TITLE RANK

FORMAT: 3 CHARACTER FIELD AT POSITION 33

DESCRIPTION:

FIRST 3 CHARACTERS OF TITLE CODE WHICH INDICATE THE RANK OF AN UNCLASSIFIED TITLE (FOR EXAMPLE: 220 = PROFESSOR, 510 = SPECIALIST).

SOURCE:

SEE TITLE CODE.

.....

.....
TITLE 4TH POSITION

FORMAT: 1 CHARACTER FIELD AT POSITION 36

DESCRIPTION:

FOURTH POSITION OF TITLE CODE WILL BE A '-' IF UNCLASSIFIED TITLE CODE.

SOURCE:

SEE TITLE CODE.

.....

.....

TITLE 5TH POSITION

FORMAT: 1 CHARACTER FIELD AT POSITION 37

DESCRIPTION:

FIFTH POSITION OF TITLE CODE WILL BE ALPHA CHARACTER IF UNCLASSIFIED TITLE CODE.

SOURCE:

SEE TITLE CODE.

.....

.....
UDDS CODE

FORMAT: 7 CHARACTER FIELD AT POSITION 38

DESCRIPTION:

THE COMBINED CODES FOR UNIT, DIVISION, MAJOR DEPARTMENT, AND
SUBDEPARTMENT.

EDIT:

SEE ENTRIES UNDER UNIT, DIVISION, MAJOR DEPARTMENT, AND
SUBDEPARTMENT.

SOURCE:

PERSONNEL ACTION FORM OR BUDGET.

.....

.....
UNIT CODE

FORMAT: 1 CHARACTER FIELD AT POSITION 38

DESCRIPTION:

AN ALPHA CHARACTER IDENTIFYING THE HIGHEST ORGANIZATIONAL LEVEL SUCH AS CAMPUS OR OTHER ADMINISTRATIVE ENTITY, SUCH AS SYSTEM ADMINISTRATION.

EDIT:

ORGANIZATIONAL UNITS

MADISON	A
MILWAUKEE	B
EAU CLAIRE	C
GREEN BAY	D
LA CROSSE	E
OSHKOSH	F
PARKSIDE	G
PLATTEVILLE	H
RIVERFALLS	J
STEVENS POINT	K
STOUT	L
SUPERIOR	M
WHITewater	N
CENTER SYSTEM	R
UNIVERSITY EXTENSION	T
REGIONAL-INTERINSTITUTIONAL PROGRAMS	V
SYSTEM ADMINISTRATION	W
SYSTEMWIDE	Y

SOURCE:

SEE UDDS CODE.
.....

.....
DIVISION

FORMAT: 2 DIGIT NUMERIC FIELD AT POSITION 39

DESCRIPTION:

IDENTIFIES THE SECOND HIGHEST ORGANIZATIONAL LEVEL AND IS NORMALLY EQUIVALENT TO A "SCHOOL" OR "COLLEGE", SUCH AS COLLEGE OF LETTERS AND SCIENCES (L&S) OR COLLEGE OF AGRICULTURAL & LIFE SCIENCES OR ADMINISTRATIVE ENTITY, SUCH AS WISCONSIN UNION OR UNIVERSITY HOSPITALS. CENTER SYSTEM DIVISIONS INDICATE LOCATION.

SOURCE:

SEE UDDS CODE.
.....
.....

MAJOR DEPARTMENT

FORMAT: 2 DIGIT NUMERIC FIELD AT POSITION 41

DESCRIPTION:

IDENTIFIES THE THIRD HIGHEST ORGANIZATIONAL LEVEL AND IS NORMALLY EQUIVALENT TO AN ADMINISTRATIVE DEPARTMENT SUCH AS ACCOUNTING CONTROL OR RESEARCH ADMINISTRATION OR TO AN ACADEMIC DEPARTMENT WITHIN A SCHOOL OR COLLEGE SUCH AS ANTHROPOLOGY OR ART HISTORY.

SOURCE:

SEE UDDS CODE.
.....

.....
SUBDEPARTMENT

FORMAT: 2 DIGIT NUMERIC FIELD AT POSITION 43

DESCRIPTION:

IDENTIFIES THE FOURTH ORGANIZATIONAL LEVEL AND IS EITHER EQUIVALENT TO AN ADMINISTRATIVE ENTITY, SUCH AS DEPARTMENT OF DERMATOLOGY OR DEPARTMENT OF NEUROLOGY IN SUCH LARGE DIVISIONS AS UNIVERSITY HOSPITALS, OR CAN BE A BREAKDOWN WITHIN A DEPARTMENT OF CLASSES OF EXPENDITURES, SUCH AS CLASSIFIED SALARIES OR SALES CREDITS.

SOURCE:

SEE UDDS CODE.

.....
.....
FULL TIME EQUIVALENT PERCENT

FORMAT: 3 DIGIT NUMERIC FIELD WITH IMPLIED DECIMAL AFTER FIRST DIGIT AT POSITION 45

DESCRIPTION:

THE FULL TIME EQUIVALENT FOR THIS PERSON IN THIS UDD AND TITLE. FOR UNCLASSIFIED, COMPUTED BY MULTIPLYING PAY PERIOD GROSS SALARY BY THE NUMBER OF PAY BASIS MONTHS AND DIVIDING BY THE ANNUAL PAY RATE. FOR CLASSIFIED, NUMBER OF REGULAR HOURS DIVIDED BY 80.

SOURCE:

COMPUTED AS STATED ABOVE.
.....

22

.....
PAYROLL CLASS CODE

FORMAT: 2 DIGIT NUMERIC FIELD AT POSITION 48

DESCRIPTION:

IDENTIFIES THE TYPE OF POSITION THE TITLE CODE AND MODIFIER REPRESENTS.

EDIT:

FOR STUDENT: 30, WORK STUDY 31
FOR CLASSIFIED: 20, 21, 22, 23, 24, 26, 27, 28
FOR FACULTY: 10, 11, 17, 19, 41, 47, 61, 71, 80, 81, 91
10 = EXTENSION CORRESPONDENCE COURSE GRADER
11 = FACULTY APPOINTMENT
17 = RESEARCH ASSOCIATE
19 = ACADEMIC STAFF
20 = SPECIAL PAY
21 = PERMANENT CLASSIFIED, 50% OR MORE
22 = LIMITED TERM AND EMERGENCY
23 = EXCEPTIONAL PERFORMANCE AWARD
24 = PERMANENT CLASSIFIED, LESS THAN 50%
26 = PROJECT POSITION, 50% OR MORE
27 = PROJECT POSITION, LESS THAN 50%
28 = LENGTH OF SERVICE
30 = STUDENT HOURLY
41 = FELLOWS/TRAINEES/SCHOLARS
47 = POST DOC FELLOWS/TRAINEES
61 = RESEARCH ASSISTANTS
71 = TEACHING ASSISTANTS
80 = UNDERGRAD ASSISTANTS
81 = PROJECT/PROGRAM ASSISTANTS
91 = POST GRAD TRAINEES/NON-MEDICAL
AND PHARMACY INTERNS

SOURCE:

TITLE DATA BASE.
.....

.....
PAYROLL CLASS CODE 1ST POSITION

FORMAT: 1 DIGIT NUMERIC FIELD AT POSITION 48

DESCRIPTION:

IDENTIFIES THE TYPE OF POSITION THE TITLE CODE AND MODIFIER REPRESENTS.

EDIT:

- 1 = ACADEMIC
- 2 = CLASSIFIED
- 3 = STUDENT
- 4 = FELLOW
- 6 = RESEARCH ASST.
- 7 = TEACHING ASST.
- 8 = PROJECT ASST.
- 9 = RESIDENTS, INTERNS & EXTERNS.

SOURCE:

SEE PAYROLL CLASS CODE.

.....
PAYROLL CLASS CODE 2ND POSITION

FORMAT: 1 DIGIT NUMERIC FIELD AT POSITION 49

.....

.....
SEX CODE

FORMAT: 1 CHARACTER FIELD AT POSITION 50

DESCRIPTION:

EMPLOYEE'S SEX.

EDIT:

- M = MALE
- F = FEMALE
- ' ' = NOT SPECIFIED

SOURCE:

FROM INFORMATION SUPPLIED ON THE W-4 FORMS.

24

.....
HERITAGE CODE

FORMAT: 1 DIGIT NUMERIC FIELD AT POSITION 51

DESCRIPTION:

EMPLOYEE'S ETHNIC HERITAGE CODE. IF NO HERITAGE CODE IS SPECIFIED, CODE 5 IS AUTOMATICALLY ASSUMED.

EDIT:

- '1' = BLACK
- '2' = ASIAN
- '3' = NATIVE AMERICAN
- '4' = HISPANIC
- '5' = OTHER

SOURCE:

FROM INFORMATION SUPPLIED ON THE W-4 FORMS.
.....

.....
EEO CATEGORY

FORMAT: 1 CHARACTER NUMERIC FIELD AT POSITION 52

DESCRIPTION:

DEFINED BY FEDERAL REGULATION. EACH TITLE CODE IS ASSIGNED AN EEO CATEGORY CODE.

EDIT:

- 1 = EXECUTIVE/ADMINISTRATIVE/MANAGERIAL
- 2 = FACULTY AND INSTRUCTIONAL ACADEMIC STAFF
- 3 = PROFESSIONAL/NON-FACULTY
- 4 = SECRETARIAL/CLERICAL
- 5 = TECH/PARAPROFESSIONAL
- 6 = SKILLED CRAFTS
- 7 = SERVICE/MAINTENANCE

SOURCE:

TITLE DATA BASE.
.....

.....
EEO SUBCATEGORY

FORMAT: 1 DIGIT NUMERIC FIELD AT POSITION 53

DESCRIPTION:

BREAKDOWN OF THE EEO CATEGORY WHICH IS USED FOR MORE DETAILED REPORTING WITHIN THE UNIVERSITY SYSTEM.

EDIT:

FOR EEO-CATEGORY '1', THE SUB-CATEGORIES ARE:
1 = UNCLASSIFIED STAFF
2 = CLASSIFIED STAFF
FOR EEO-CATEGORY '2', THE SUB-CATEGORIES ARE:
1 = LEGAL FACULTY
2 = OTHER INSTRUCTIONAL STAFF
FOR EEO-CATEGORY '3', THE SUB-CATEGORIES ARE:
1 = DOCTORAL STAFF
2 = EMPLOYES-IN-TRAINING
3 = OTHER ACADEMIC STAFF
4 = STUDENT STAFF
5 = CLASSIFIED PROFESSIONAL
EEO-CATEGORIES 4, 5, 6, AND 7 HAVE NO SUB-CATEGORIES.

SOURCE:

TITLE DATA BASE.
.....

.....
BASE FILE

FORMAT: 1 DIGIT NUMERIC FIELD AT POSITION 54

DESCRIPTION:

INDICATES THE SOURCE OF THIS RECORD.

EDIT:

1 = BOTH BUDGET AND SALARY
2 = SALARY
3 = BUDGET (RED BOOK)
4 = MAINTENANCE

SOURCE:

COMPUTER GENERATED.
.....

.....
LEAVE INDICATOR

FORMAT: 1 CHARACTER FIELD AT POSITION 55

DESCRIPTION:

USED TO INDICATE A PERSON ON LEAVE FROM THE UNIVERSITY.

EDIT:

L = ON LEAVE
BLANK = ACTIVE

SOURCE:

BUDGET OR MAINTENANCE.
.....
.....

TENURE CODE

FORMAT: 1 CHARACTER FIELD AT POSITION 56

DESCRIPTION:

INDICATES THE TENURE STATUS OF THE INDIVIDUAL.

EDIT:

'*' = TENURE HAS BEEN GRANTED
' ' = NO TENURE

SOURCE:

BUDGET.
.....

.....
PRIMARY RECORD INDICATOR

FORMAT: 1 CHARACTER FIELD AT POSITION 57

DESCRIPTION:

INDICATES THE PRIMARY RECORD WITHIN A DEPARTMENT (UDD). IF PERSON HOLDS MORE THAN ONE APPOINTMENT WITHIN A DEPARTMENT, ONLY ONE RECORD WILL BE PRIMARY. THE PRIMARY RECORD IS CHOSEN IN THE FOLLOWING WAY:

1. STUDENT TITLES ARE NOT PRIMARY UNLESS IT IS THE ONLY TITLE A PERSON HAS.
2. UNCLASSIFIED TITLES ARE CHOSEN ABOVE CLASSIFIED TITLES.
3. EEO CATEGORIES 21 AND 22 (LEGAL FACULTY AND OTHER INSTRUCTIONAL STAFF) ARE CHOSEN ABOVE OTHER UNCLASSIFIED TITLES.
4. IF NO INSTRUCTIONAL TITLE EXISTS, THE LOWEST UNCLASSIFIED TITLE CODE IS CHOSEN (HIGHEST RANK).
5. PERMANENT CLASSIFIED IS CHOSEN ABOVE LTE CLASSIFIED, OTHERWISE THE TITLE WITH THE HIGHEST PAY RANGE IS CHOSEN.

EDIT:

X = PRIMARY
BLANK = OTHERWISE

SOURCE:

COMPUTER GENERATED.
.....

.....
MARITAL STATUS

FORMAT: 1 CHARACTER FIELD AT POSITION 58

DESCRIPTION:

EMPLOYEE MARITAL STATUS. THIS IS A PERSONS TRUE MARITAL STATUS AS OPPOSED TO TAXATION MARITAL STATUS. THIS ELEMENT IS NOT USED IN EEO REPORTS.

EDIT:

- 'M' = MARRIED
- 'S' = SINGLE
- ' ' = UNKNOWN

SOURCE:

FROM INFORMATION SUPPLIED ON THE W-4 FORMS.

.....
SOCIAL SECURITY TAX INDICATOR

FORMAT: 1 CHARACTER FIELD AT POSITION 59

DESCRIPTION:

USE TO INDICATE WHETHER SOCIAL SECURITY SHOULD BE TAKEN. THIS FIELD IS TIED TO THE CLASS CODE. A BLANK FIELD INDICATES WHAT IS TO BE DONE NORMALLY. FOR CLASSES 1, 2, 7, 8, 9 SOCIAL SECURITY TAXES ARE NORMALLY TAKEN. IF TAXES SHOULD NOT BE TAKEN, AN 'N' WOULD BE PRESENT. FOR CLASSES 3, 4, 5 AND 6 SOCIAL SECURITY TAXES ARE NORMALLY NOT TAKEN. IF TAXES SHOULD BE TAKEN, THE 'Y' WOULD BE PRESENT.

EDIT:

- ' ' = BLANK
- 'Y' = YES
- 'N' = NO

SOURCE:

PAYROLL DATA BASE.
.....

.....
SCHEDULE OF PAYMENT

FORMAT: 1 CHARACTER FIELD AT POSITION 60

DESCRIPTION:

THE SALARY SCHEDULE COMBINED WITH RANGE, DEFINES A SALARY CATEGORY FOR A GIVEN TITLE CODE FOR BOTH MONTHLY AND HOURLY PERSONNEL.

EDIT:

THE SALARY SCHEDULE/RANGE DETERMINES THE MINIMUM, MAXIMUM, PSICM AND SALARY STEP.

SOURCE:

TITLE DATA BASE.

.....
RANGE OF PAYMENT

FORMAT: 2 CHARACTER FIELD AT POSITION 61

DESCRIPTION:

THE RANGE COMBINED WITH SCHEDULE DEFINES A SALARY CATEGORY FOR A GIVEN TITLE CODE FOR BOTH MONTHLY AND HOURLY PERSONNEL.

EDIT:

THE SALARY SCHEDULE/RANGE DETERMINES THE MINIMUM, MAXIMUM, PSICM AND SALARY STEP.

SOURCE:

TITLE DATA BASE.
.....

.....
SOFT MONEY

FORMAT: 1 CHARACTER FIELD AT POSITION 63

DESCRIPTION:

SOFT MONEY IS SALARY EARNED FOR THIS APPOINTMENT FROM ONE OF THE FOLLOWING FUNDS: 133, 134, 135, 136, 141, 142, 143, 144, 145, 146, 147, 148, 150, 151, 152, 161, AND 163. THESE FUNDS ARE NON-STATE SUPPLIED MONEY.

Y = YES
BLANK = NO

SOURCE:

COMPUTER GENERATED.
.....

.....
JOB CODE

FORMAT: 2 DIGIT NUMERIC FIELD AT POSITION 64

USED BY MADISON CAMPUS ONLY.
CODE ASSIGNED TO EACH TITLE CODE WHICH IS PAID THRU THE A W PETERSON PAYROLL OFFICE. THE JOB CODE, WHEN USED WITH EEO CATEGORY AND SUB-CATEGORY, IS USED TO GROUP TOGETHER TITLE CODES OF SIMILAR PAY RANGES, RESPONSIBILITIES AND CAREER PATHS FOR EEO WORK FORCE ANALYSIS PURPOSES. EXAMPLES:

CAT	SUB-CAT	JOB CODE
1 - OFF & MGRS	1 - UNCLASS	05 - DEANS AND DIRECTORS
1 - OFF & MGRS	1 - UNCLASS	04 - ASST DEANS & ASST DIRECTORS
1 - OFF & MGRS	2 - CLASSIFIED	01 - PERSONNEL MANAGER 5 & 6 PER ADMIN OFFICER 1 - 4

SOURCE:

TITLE DATA BASE.
.....

.....
BIRTHDATE

FORMAT: 6 DIGIT NUMERIC FIELD AT POSITION 66

DESCRIPTION:

DATE OF BIRTH. FORMAT IS MONTH-DAY-YEAR.

SOURCE:

PERSONNEL ACTION FORM OR BUDGET.

.....
.....
ALPHA TITLE NAME

FORMAT: 21 CHARACTER FIELD AT POSITION 72

DESCRIPTION:

ALPHABETIC TITLE NAME ASSIGNED TO THE 5 CHARACTER TITLE CODE.

SOURCE:

TITLE DATA BASE.

.....
.....
BARGAINING UNIT CODE

FORMAT: 2 DIGIT NUMERIC FIELD AT POSITION 93

DESCRIPTION:

CODE THAT INDICATES THE BARGINING GROUP THAT INCLUDES THIS TITLE.

SOURCE:

TITLE DATA BASE.

.....

.....
PAY BASIS

FORMAT: 1 CHARACTER FIELD AT POSITION 95

DESCRIPTION:

USED TO INDICATE HOW THIS EMPLOYEE IS PAID AND/OR BUDGETED.

EDIT:

- A = ANNUAL UNCLASSIFIED
 - B = 10 MONTH UNCLASSIFIED
 - C = 9 MONTH UNCLASSIFIED
 - S = SUMMER UNCLASSIFIED
 - H = HOURLY
 - L = LUMP SUM
- DETERMINES FORMAT OF PAY RATE.

SOURCE:

PERSONNEL ACTION FORM OR BUDGET.

.....
PAY RATE

FORMAT: 5 DIGIT NUMERIC FIELD AT POSITION 96

DESCRIPTION:

PERSON'S RATE OF PAY, EITHER ANNUAL, HOURLY OR LUMP SUM.

EDIT:

- FORMAT DEPENDS ON PAY BASIS:
- A, B, C OR S = 99,999
 - H = 99.999
 - L = 999.99

SOURCE:

PERSONNEL ACTION FORM OR BUDGET.

.....
ANNUAL RATE

FORMAT: 5 DIGIT NUMERIC FIELD AT POSITION 96

DESCRIPTION:

IF THE PAY BASIS IS A, B, C OR S, THEN THE SALARY IS PAID MONTHLY. THE ANNUAL RATE IS THE DOLLAR AMOUNT PAID TO A FULL TIME EMPLOYE DURING THE APPOINTMENT PERIOD. FORMAT IS 99,999.

SOURCE:

SEE PAY RATE.

.....

.....
HOURLY RATE

FORMAT: 5 DIGIT NUMERIC FIELD AT POSITION 96

DESCRIPTION:

IF THE PAY BASIS IS H, THEN THE SALARY IS PAID AT AN HOURLY RATE. THE HOURLY RATE IS THE DOLLAR AMOUNT PAID FOR EACH HOUR IN PAY STATUS DURING A PAYROLL PERIOD (BI-WEEKLY OR MONTHLY). FORMAT IS 99.999.

SOURCE:

SEE PAY RATE.

.....

.....
LUMP SUM RATE

FORMAT: 5 DIGIT NUMERIC FIELD AT POSITION 96

DESCRIPTION:

IF THE PAY BASIS IS L, THEN THE SALARY IS PAID AS A LUMP SUM AMOUNT. FORMAT IS 999.99.

SOURCE:

SEE PAY RATE.

.....

24

.....
VISA CODE

FORMAT: 1 CHARACTER FIELD AT POSITION 101

DESCRIPTION:

INDICATOR FOR FOREIGN EMPLOYEES WITH A VISA. THE FIELD IS USED TO DETERMINE TAX STATUS AND FRINGE BENEFIT ELIGIBILITY OF FOREIGN EMPLOYEES.

EDIT:

- 1 - EMPLOYEES FROM A FOREIGN COUNTRY WHO HAVE A TYPE 'F' (TEMPORARY, STUDENT) OR 'J' (VISITING FACULTY) VISA
- 2 - ALL OTHER TEMPORARY VISAS
- 3 - ALL IMMIGRANT PERMANENT VISAS

SOURCE:

FROM INFORMATION SUPPLIED ON THE W-4 FORM.

.....
ANNUAL SALARY

FORMAT: 5 DIGIT NUMERIC FIELD AT POSITION 102

DESCRIPTION:

IF HOURLY PAY BASIS, HOURLY RATE TIMES 2088 TIMES FULL TIME EQUIVALENT PERCENT (FTE).
IF A, B, C OR S PAY BASIS, ANNUAL SALARY IS THE ANNUAL RATE TIMES FULL TIME EQUIVALENT PERCENT (FTE).

SOURCE:

COMPUTER GENERATED.

.....

.....
TOTAL FTE

FORMAT: 3 CHARACTER NUMERIC FIELD WITH IMPLIED DECIMAL AFTER FIRST POSITION
AT POSITION 109

DESCRIPTION:

SUM OF ALL THE APPOINTMENT FTES. SEE FULL TIME EQUIVALENT
PERCENT.

SOURCE:

COMPUTER GENERATED.

.....

.....
TENURE PERCENTAGE

FORMAT: 3 DIGIT NUMERIC FIELD WITH IMPLIED DECIMAL AFTER FIRST POSITION
AT POSITION 112

DESCRIPTION:

USED BY MADISON CAMPUS ONLY.
SHOWS THE FRACTION OF TENURE THAT THE INDIVIDUAL HOLDS IN THE
TITLE AND UDDS OF THIS RECORD. THE LOWEST TENURE PERCENTAGE IN
AN APPOINTMENT WILL BE 0.00 AND THE HIGHEST WILL NOT
EXCEED 100.00.

SOURCE:

TENURE DATA BASE.

.....

.....
ALPHA UNIT NAME

FORMAT: 39 CHARACTER FIELD AT POSITION 134

DESCRIPTION:

ALPHABETIC NAME FOR A GIVEN CAMPUS OR ADMINISTRATIVE ENTITY.
SEE UNIT CODE.

SOURCE:

UDDS DATA BASE.

.....

.....
ALPHA DIVISION NAME

FORMAT: 39 CHARACTER FIELD AT POSITION 173

DESCRIPTION:

ALPHABETIC NAME FOR A GIVEN DIVISION. SEE DIVISION.

SOURCE:

UDDS DATA BASE.

.....
.....
ALPHA DEPARTMENT NAME

FORMAT: 39 CHARACTER FIELD AT POSITION 212

DESCRIPTION:

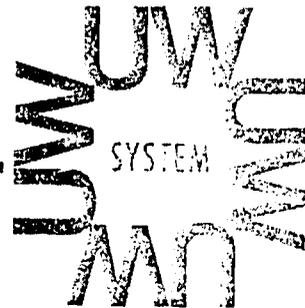
ALPHABETIC NAME FOR A GIVEN DEPARTMENT AND SUBDEPARTMENT. SEE
MAJOR DEPARTMENT AND SUBDEPARTMENT.

SOURCE:

UDDS DATA BASE.

.....

Information Systems



ANALYSIS SERVICES AND INFORMATION SYSTEMS
Room B156 W.A.R.F. Building / P.O. Box 8010 / Madison, Wisconsin 53708

January 3, 1983

RECEIVED

JAN 5 1983

MEMORANDUM

OFFICE OF ANALYSIS SERVICES
AND INFORMATION SYSTEMS

TO: Elwin Cammack
FROM: John Proctor *JP*
SUBJECT: Computer Configurations for Indonesia

I have received the following configuration from the local IBM office for Indonesia. This configuration is based upon the one drawn up for Bob Fox and sent to China. It includes a two megabyte processor and appropriate peripherals. I stayed with the 4331 series because of the internal communications feature. The local office is very much interested in becoming involved in the order should the University wish to purchase. Our 15% discount would be operative for them. "Market value" is estimated cost of used equipment.

<u>Model #</u>	<u>Type of Equipment</u>	<u>Purchase Price</u>	<u>Market Value</u>
4331 K02	Processor (2 megabytes)	\$112,645	\$76,000
3278 A02	Display Console	3,515	--
3262 001	Line Printer	15,040	12,400
3505 B01	Card Reader	42,400	23,000
3525 P01	Card Punch	25,520	7,000
3340 A02	Disk Storage (with controller)	9,190	3,250
B02	Disk Storage	6,610	2,000*
B02	Disk Storage	6,610	2,000
3411 001	Tape Drive and Controller	11,000	8,500
3410 001	Tape Unit	9,010	2,500
001	Tape Unit	9,010	2,500

Note: Current keypunch units will probably serve. This machine has an integrated communications adaptor for connection to microcomputers over phone lines and modems. A communications controller is needed for local interface.

*I could provide one or two of these.

jp/jh