

COMPUTERISATION OF ADMINISTRATIVE ASPECT OF UNITED BANK FOR
AFRICA PLC, MINNA: HUMAN RESOURSE MANAGEMENT.

BY

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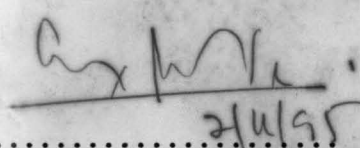
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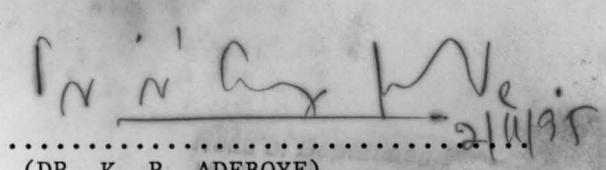
CERTIFICATION

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D E D I C A T I O N .

FOR YOUR ADVICES, PRAYERS AND MORAL SUPPORT, I DEDICATE
THIS PROJECT TO YOU:-

PASTOR JOSEPH EBHOHIMEN [MY BELOVED SPIRITUAL FATHER]

MRS F.K. MOGBA [MY DEARLY BELOVED WIFE]

GEORGE, ELIZABETH AND SAMUEL (MY DEAR GOOD CHILDREN).

ACKNOWLEDGEMENT.

TO MY GOD, OUR HEAVENLY FATHER, THANK YOU.

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ABSTRACT

This project was embarked upon with a view to improving the Administrative Aspect of United Bank for Africa Plc, Minna with the aid of computer.

Branch operations are computerised but with limitations. Administrative Aspect (Human Resources) is not computerised thereby causing files to be checked each time an information is to be extracted. Certain documents may not be placed in files at the right time or may be misplaced, hence no complete information could be obtained. Human Aspect is the most important factor in an organisation or establishment and therefore requires attention. It is against this background that the administrative Aspect was considered for study and it is believed that lots of benefits will accrue to both the Management and the staff.

The History of Computers and Administration is discussed in this work in order to appreciate computerisation and Administration, also as it started in United Bank for Africa Plc. How these set-ups affect United Bank for Africa Plc, Minna is discussed to enable further appreciation.

We shall then be able to understand the reason and necessity for computerisation of the Administrative Aspect.

The data used for the work was collected from United Bank for Africa Plc, Minna through interviews conducted with staff-members and from personal knowledge of the administrative procedure of the establishment.

OUTLINE FOR PGD COMPUTER SCIENCE :
 COMPUTERISATION OF ADMINISTRATIVE ASPECT OF UNITED BANK
 FOR AFRICA PLC, MINNA: HUMAN RESOURCES MANAGEMENT.

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C H A P T E R I

HISTORY, REVIEW OF ADMINISTRATION AND COMPUTERISATION

1:1 INTRODUCTION:

Computerisation is the involvement of computer and other equipment and materials in the processing of data resulting into specific information useful for decision making.

Administration is the involvement of men (who are below the board level) in the implementation of the board's policies. These men (General Managers, Deputy General Managers, Assistant General Managers, Principal Managers, Senior Managers, Branch Managers in United Bank for Africa Plc) are concerned with carrying out the policies using men to fulfil the requirements. Therefore, improvement of these men for greater productivity, need not be over emphasized, hence the keeping at finger tips, information relevant to these men for quick action.

The introduction of computer in Administration is for effective management. Computer oriented information is well processed and analysed.

1:2 OBJECTIVES:

This project was conceived to improve the old system of operation especially filing of documents. The old system (manual operation) operates slowly and inaccurately as regards entry and retrieval of information. Filing enable update of files and accessing of information. The introduction of computer into the administration of United Bank for Africa Plc, has eliminated the difficulty experienced in entry and retrieval of information on staff especially at Head Office level. At Branch level, the manual operation still in use, creates no room for speed and accuracy.

The introduction of computer into administration of United Bank for Africa Plc, Minna would bring positive changes vis-a-vis faster and more accurate reports generation: Time saving, quick response to Head Office requirements and attention to training programmes for members of staff.

Computerisation has made immense impact in the Banking Industry especially at Head Office level. Banking operations, Administration and Personnel matters are computerised for quick processes, easy reports generation and rendition of returns.

At branch level, Personnel matters are not automated, this is what this project is poised to accomplish. Man is important in any organisation and therefore, the welfare of its men should be concern of every organisation. To keep abreast of their welfare means keeping the organisation alive. Management must be interested in men who provide the necessary services to the public for its benefit. So this project also considers the training of staff, to be equipped for the job to be performed.

'Customer is King' says the marketer. The main concern of United Bank for Africa Plc Management, is customer satisfaction. Therefore, to provide "the most efficient and courteous services" United Bank for Africa Plc makes available several training opportunities: On-the-job, Formal Education at Training Schools, courses at the Universities and Polytechnics.

Training imbues in staff the required attitude to serve management and customers better. In a nut-shell, the objective of this project is staff training for efficient handling of computer, equipment and customers.

1:2:1 SCOPE:

In training services and retraining the right personnel for the appropriate job, the entry and retrieval of information on staff to aid efficiency and effectiveness on the job are within the scope of this project. The computer, which is a medium for obtaining efficient and effective information, uses several systems to achieve this. Data base Management System is the system chosen to manage and maintain the database resources of this organisation which provide the data transformed by Management Information System into information for decision making.

1:3 HISTORY OF COMPUTERS:

Information processing is interesting, especially if processing is at fast speed and accuracy - common to computers. Computer processes data and produces results in several ways. The work of earlier machines cannot be compared to the speed and accuracy at which this great machine works; what makes it to work; when it was invented; and who the contributors were.

With the above knowledge behind our minds, we would appreciate the introduction of computers to our homes, offices, factories, churches etc. So the fear that it has come to render us jobless shall be erased from our minds and we shall see it as our friend that has come to lighten our burden.

The history of computers therefore will aid us appreciate computers and improve upon it. Abacus was one of the earliest calculating devices. It was invented about 5000 years ago by some Chinese. Napier Bones invented in 1617 by John Napier, was used in doing multiplications. In 1642, Pascal invented a device only capable of additions. (It had techniques similar to the present day computers - its dials equivalent to the keyboard; answers appeared at the top of the machine, equivalent to the display unit), the input, processing, output cycle, being a feature of the present day computers. In 1952, Slide Rule was invented by William Oughtred which was used for looking up and doing calculations. Gottfried Leibnitz produced the first mechanical (machine) calculator capable of multiplication. In 1820 or thereabout, Charles Babbage (regarded as the father of computing) developed the Difference Machine - based on mathematical method called differences. Babbage developed another machine called Analytical Engine - the concept of the modern machine was realised at this stage. This machine consists of, and similar to the Arithmetic Unit, Control Unit, Store and Output Units of the modern computer.

In 1880, Jacquard, J. improved upon the Analytical Engine by developing punched cards used to control the mathematical calculations in the Analytical Engine. Herman Hollerith produced Hollerith's tabulating machine - a data processing machine in 1890.

In 1946, ENIAC was produced to perform calculations fast. In 1948, Williams Shockley invented electronic valves which were used in the first Generation Computers. Years later, transistor was invented which gave rise to the Second Generation Computers. Integrated circuit was developed and this gave rise to Third Generation Computers. In the 1980s Chips were developed leading to Fourth Generation Computers. Later on, Super Computers came into being, making way for the Fifth Generation Computers.

Electronic (Thermionic) valves were used in the first generation computers, transistors in the second generation computers, silicon chip (integrated circuits) in the third generation computers, microprocessors in the fourth generation computers, while mainframes (super computers) in fifth generation computers.

Though these electronic components perform the same functions, the electricity and energy consumption became lesser as developments occur from First Generation Computers to Fifth Generation Computers. The space occupied by these computers became smaller while the speed and reliability became more efficient with reduction in the costs involved, as developments occurred.

1:4 REVIEW OF BANK ADMINISTRATION:

The Bank has faith in all category of its workers. It believes that all members of the staff are essential to its growth, continued success and profitability. Therefore, it provides Handbook for staff guidance and enlightenment. The Bank embarks on motivational programmes to sustain staff morale, and enhance productivity. These morale boosting programmes are: Promotion, to reward deserving-staff; Long-Service Award; Pensions Scheme; Retirement Benefits,; Exgratia Payments; Increase in salary and allowances. The Bank arranges courses at United Bank for Africa Plc Training Centres (schools); external courses by competent consultants and Training Institutions, in Nigeria and overseas. Between April,1993 and March 1994, a total of 2,050 members of the staff attended various courses, in-house and external at both local level and abroad.

1:4:1 BRIEF ON VARIOUS TRAINING PROGRAMMES:

(a) INDUCTION COURSE:

Every member of the staff attends formal induction course soon after joining the Bank. Induction course has to do with introducing him to the operational rules and regulations of the organisation/establishment.

(b) ON-THE-JOB TRAINING:

Members of the staff are trained while working in the Branch or Head Office. The co-ordination of this arrangement is by the Bank's Personnel Division.

(c) IN-HOUSE (INTERNAL):

The training department plans and runs the in-house training after ascertaining the overall training needs. Training Department is under Personnel Division and it is located at Apapa, Lagos, Regional Training Schools are in Kano and Port Harcourt.

(d) EXTERNALLY (BY COMPETENT CONSULTANTS AND INSTITUTIONS):

The Training Manager liaises with external trainers, arranges programmes and co-ordinates these programmes for the benefit of staff.

1:5 BRANCH ADMINISTRATION REVIEW:

A Branch of United Bank for Africa Plc usually carries out the duties of the entire organisation at the branch. Therefore it performs the duties in line with the policies of the Bank. Policies, terms and conditions are to be observed by all Divisions, Regions, Departments, Branches etc, no matter its size. Promotion, training and development of staff, disciplinary measures, are to serve as improvement and refreshment of staff for improved performance.

1:6 HISTORY OF UNITED BANK FOR AFRICA PLC:

United Bank for Africa Plc formerly United Bank for Africa Limited until 1990, was established in 1961 by a consortium of five international Banks to take over the business carried on in Nigeria. British and French Bank Limited owned 40% in United Bank for Africa Plc shareholding, Nigerian Public owned 18.34%. By June, 1994, the Federal Government sold all its shares in United Bank for Africa Plc to Nigerian individuals thus bringing Nigerian individuals' share to 60%. Branches of this Bank exist also in New York, Grand Cayman Island and Representative office in London. It maintains correspondent relationship in Africa and in major countries in the world. Presently the Bank's Domestic Branch net work stands at 199 while those of overseas stands at 3 - A total of 204 Branches in the world by May, 1995.

French and American Banking Corporation, Bank Nationale De Paris, Bank Nationale de Lavoro, Bank Nationale De Sienna are shareholders of United Bank for Africa Plc.

To enhance efficiency in the Bank's service delivery, computerisation aka the BRAINS (Branch Accounting Information System) is in existence in Marina Branch, NICON NOGA, Abuja Branch, Idowu Taylor Lagos, and Adeola Odeku Lagos Branches, while implementation in 11 more branches are being completed and soon to be put in use. Many other Branches are computerised using the Batch System which is limited to Accounting area, though has reduced the work of staff considerably, the administrative aspect is not improved.

1:7 HISTORY OF UNITED BANK FOR AFRICA PLC, MINNA:

United Bank for Africa Plc, Minna Branch was opened in March, 1981. Ledger cards were used as at that time (this entailed postings to ledger cards manually). In 1982, Accounting machines were introduced to do more than what hand could do. This latter method was faster and more accurate than the former. In 1990, computerisation was introduced which eliminated mechanization.

Computers came to reduce work and queues at counters, yet work in administration is left to be done manually.

Administration enables right people, right equipment and machines etc to be used in doing work for efficiency.

The absence of this, does not allow service to the public to be done in the best way possible.

1:8 STAFF APPRAISAL:

Staff performance appraisal is a tool for assessing staff performance. This tool is very important and United Bank for Africa Plc periodically performs this exercise. This helps to assess the attitudes of staff i.e. their behaviour towards their jobs, peers, sub-ordinates, superiors and customers.

To wait for the end of a period, a year in United Bank for Africa Plc, certain values may have been lost; therefore computerisation would enable, even daily input of some data to assist with appropriate information at the end of the period.

1:9 DEFINITION OF TERMS:

MOTIVATION: Is the inducing of people to work to the best of their ability.

APPRAISAL: Is the exercise undertaken to enable the Board and the management of an organisation evaluate the strength and weaknesses of staff in order to identify their training needs and receive appropriate remuneration.

DELEGATION: Is entrusting some part of the work of management to subordinates.

CLASS
CONFLICT: Is the disagreement between two or more persons (in the same group or different groups)

JOB
ENRICHMENT: Means the exercise of more discretion and responsibility than previously exercised in the same job.

JOB
ENLARGEMENT: Means addition of one or more related tasks, therefore increased scope for initiative and skill.

- JOB ROTATION:** Means the movement from one job to another - one task being different from another.
- STAFF CIRCULAR:** Are letters from Head Office to all Branches, Divisions, Regional Offices, Departments concerning welfare of staff and disciplinary measures.
- C.B.N. NOTICES:** Are letters (concerning regulations from Central Bank of Nigeria) from Head Office to Divisions, Regional offices, Branches and Departments.
- HEAD OFFICE CIRCULAR:** Are letters from Head Office to Divisions, Regional Offices, Branches and Departments in respect of Head Office and Branch operations.
- INSTRUCTION MANUAL:** Is a document containing rules regulating operations of various areas of the Bank.
- DIARY CARDS:** Are kept for reminding operators (Branch, Regional, Head Office Management) of the operations necessary to be carried out on specific periods.

C H A P T E R I I

FEASIBILITY STUDY

2:0 This study has to do with determining the need for a change of the current system. Not all current systems need revision and not everything in the current systems call for changes. With computing, revision of the manual system is necessary. This is to say that current systems need be changed where development is continuous or where the system is not operating properly. Changes could occur from a manual system to another.

This study is generally carried out to determine whether or not the existing system needs an alternative. Except there is full understanding of the existing system, analysis cannot be done.

The current system which was considered for revision in this project is the manual record keeping of Personnel, Admin information. Files created to keep documents of the members of staff are considered for conversion to computer system.

2:1 THE EXISTING PROCEDURE:

Proper study of the existing procedure and development of alternative solutions are necessary for the introduction of a new system. Manual entry and retrieval of information was studied. United Bank for Africa Plc, Minna is computerised though with limitations. The activities computerised are the Savings, Current and Impersonal Accounting Systems. However, Administration is not computerised thereby entry and retrieval of information from files are manually done.

To keep records, files are kept on individual staff in Filing Cabinets. These are removed from the cabinets whenever documents (containing information on the members of staff) are to be placed in the files. Removal of files for retrieval of information is repeated whenever information is required on members of staff.

2:2 THE FAULTS WITH THE EXISTING PROCEDURE:

This system is open to mis-filing of documents, delayed filing of documents, bulky files and documents, and failure to file documents which cause delays in obtaining information on the members of staff, inaccurate information extraction and no information at all. The space, occupied by cabinets and files, is not comparable with the space occupied by a small computer (PG) which retains more information than the large cabinets. Ample time is wasted when updating files.

Time wasted in entry, storage and retrieval of information could have been utilized efficiently in other matters. The proposed system (procedure) shall take into consideration the lapses raised.

Decisions taken always on members of staff require accurate information, accessibility of information and the ease at which accessibility is attained. Training arrangement, leave and movement of members of staff will arise out of the availability of good information. Appraisal of members of staff arise from the availability of good, timely and accurate information.

2:3 BENEFITS OF PROPOSED PROCEDURE:

The computerisation of Administration of United Bank for Africa Plc, Minna, is a way to improve the lapses observed.

- Time wastage
- Inaccurate information
- Storage problem
- Delayed Reports
- Appraisal of the members of staff
- Arrangement of courses and training
- Transfers within departments
- Occupation of large space

Information on members of staff allows for quick attendance to their requirements, hence their willingness to yield to training for appropriate jobs and better attitude to superiors, peers, subordinates and customers.

Information on members of staff allows for quick response to Head office or Regional Office requests on them, which create opportunities for them as decisions are taken to their advantage.

The way records are kept determines the rate at which information is obtained. Elimination of storage problem creates easy access to information, allowing for the advantages of staff education, customer satisfaction and organisation's benefits.

The PC which utilizes a little space houses a lot of information which cannot be kept by the cabinets and files irrespective of their sizes or number.

C H A P T E R 3

DATA GATHERING

3:0 Data gathering is necessary to carry out this project. In fact, without data gathering which is the collection of data (i.e. raw material or input collection), the achievement of this project would have been a mere dream. Data is collected to produce information which pass on knowledge from one person to another. Data gathering requires the fact finding techniques.

3:1 FACT FINDING TECHNIQUES:

Fact finding techniques comprise of interviews, record review, observation, and questionnaire. Through these methods or some of them, were information gathered on Personnel Administration (Administrative Aspect: Human Resource) of United Bank for Africa Plc, Minna.

Facts were gathered about this organisation's filing procedure (manual), the strength and weaknesses were noted for detailed study and were also discussed with the Branch Management.

In the new system, the strength was retained while the weaknesses were eliminated for a better system to be in operation.

3:2 INTERVIEWS:

Facts gathered prompted questions which were duly responded to. A cross-section of the members of the staff were interviewed. Senior and junior members of staff who were either the Supervisors or the Supervised, were engaged in both structured and unstructured interview.

Initially, the analyst was getting acquainted with the users of the computers in the computer section, also with workers in the Accounting Department (in relation to the computerisation in vogue).

As time passed, the strength and weaknesses of the system were understood, progress was made on the interview method then structured interview was applied. The interview was conducted among three members of senior staff and two members of junior staff.

The following are the questions and answers.

- (A) What do you understand by computerisation?
- (i) Answers from senior members of staff:-
 - (a) High level technology whereby things are done faster by more sophisticated means.
 - (b) A change-over of a system to a more sophisticated device to take care of procedures to meet goals promptly.
 - (c) Process of reducing work load to barest minimum labour and reducing time usage.
 - (ii) Answers from junior members of staff:-
 - (a) Process of arranging and collecting data in an organised form for easy and faster results.
 - (b) Accurate and prompt report generation.
- (B) What do you understand by Administration?
- (i) Answers from senior members of staff:-
 - (a) A way of getting things done through people in organised manner.
 - (b) Taking control of a set of people and material to achieve an organisation's aim.
 - (c) The way and manner in which a unit is being run.
 - (ii) Answers from junior members of staff:-
 - (a) Process of co-ordinating people/materials
 - (b) Working together in an establishment by three or more people towards organising the rest people, machines, equipments etc to perform the tasks assigned for Management satisfaction.

- (C) Have you ever inquired or thought of why only the accounting section is computerised? Why?
- (i) Answers from senior members of staff:-
 - (a) No. 'Didn't think about it'.
 - (b) No. Simply thought that United Bank for Africa's aim can always be communicated to branches when embarking on such project and when communicated, action starts.
 - (c) Yes. Cost of computer configuration and maintenance are high.
 - (ii) Answers from junior members of staff:-
 - (a) No. 'Didn't think about it'.
 - (b) No. 'Didn't ask'.
- (D) Computerisation is the automation of processes for faster and more accurate report generation. If this is so, would you recommend it for the Branch Personnel section?
- (i) Answers from senior members of staff:-
 - (a) Yes
 - (b) Yes
 - (c) Yes
 - (ii) Answers from junior members of staff:-
 - (a) Yes
 - (b) Yes
- (E) What major improvement have you noticed since the partial computerisation of your Branch?
- (i) Answers from senior members of staff:-
 - (a) Overtime hours have been considerably reduced.
 - (b) Customers' accounts are now automatically balanced and trial balancing no longer takes place manually.
 - (c) Periodic returns to Head and Regional Offices are now timely.

(C) Have you ever inquired or thought of why only the accounting section is computerised? Why?

(i) Answers from senior members of staff:-

(a) No. 'Didn't think about it'.

(b) No. Simply thought that United Bank for Africa's aim can always be communicated to branches when embarking on such project and when communicated, action starts.

(c) Yes. Cost of computer configuration and maintenance are high.

(ii) Answers from junior members of staff:-

(a) No. 'Didn't think about it'.

(b) No. 'Didn't ask'.

(D) Computerisation is the automation of processes for faster and more accurate report generation. If this is so, would you recommend it for the Branch Personnel section?

(i) Answers from senior members of staff:-

(a) Yes

(b) Yes

(c) Yes

(ii) Answers from junior members of staff:-

(a) Yes

(b) Yes

(E) What major improvement have you noticed since the partial computerisation of your Branch?

(i) Answers from senior members of staff:-

(a) Overtime hours have been considerably reduced.

(b) Customers' accounts are now automatically balanced and trial balancing no longer takes place manually.

(c) Periodic returns to Head and Regional Offices are now timely.

- (ii) Answers from junior members of staff:-
 - (a) Queues at the counters have reduced.
 - (b) Faster monthly, quarterly and yearly returns are being rendered.

- (F) From the above response deduction could be made that the new system has replaced old system in the weakness area and automated the strength and weaknesses combined?
 - (i) Answers from the senior members of staff:-
 - (a) Yes
 - (b) Yes
 - (c) Yes
 - (ii) Answers from the junior members of staff:-
 - (a) Yes
 - (b) Yes

- (G) What are these weaknesses?
 - (i) Answers from the senior members of staff:-
 - (a) - Slow processes of results
 - Storage problem
 - Lateness in rendition of returns
 - (b) - Time wastage in entry, process, retrieval of information.
 - Cabinets which house staff files occupy too large space
 - Figures and data are not easily extracted
 - Duplication of duties exist
 - (c) - Misfiling of documents
 - Failure to file documents
 - Delay in obtaining information from files
 - Inaccurate information extraction
 - Arrangement of courses and training sometimes haphazard.
 - (ii) Answers from junior members of staff:-
 - (a) - Time wastage especially in attending to customers when accounts are not balanced through trial balance
 - Energy loss
 - Inefficiency in reports handling

- (b) - Time wastage
 - Energy loss
 - Heavy work load
- (H) So you are scared of computerisation?
- (i) Answers from senior members of staff:-
 - (a) No.
 - (b) No.
 - (c) No.
 - (ii) Answers from junior members of staff:-
 - (a) Yes
 - (b) No.
- (I) Would computerisation not cost your job?
- (i) Answers from senior members of staff:-
 - (a) No.
 - (b) No.
 - (c) No.
 - (ii) Answers from junior members of staff:-
 - (a) Yes
 - (b) No.
- (J) Why do you think so?
- (i) Answers from senior members of staff:-
 - (a) A lay man will certainly be scared of introduction of computer in his work place but anyone who has been trained in one form of computing course or the other will not fear computerisation.
 - (b) A computer literate is confident that he will fit in computer environment.
 - (c) United Bank for Africa had sent me for computer appreciation course and I believe if they would lay me off no training would have been done.
 - (ii) Answers from junior members of staff:-
 - (a) Since I joined this organisation, I have never attended a computer course, so I feel so bad about it. I do not seem fit into this organisation any more.

(b) As a system operator, I have come to realise that computer simplifies one's work, especially when compared to time past when machines were being used. United Bank for Africa PLC trained me on the machine, now on computer so she is ready to keep me.

(K) What is your organisational structure?

Answers from all interviewed is somewhat as mentioned hereunder:-

1. Board of Directors [Comprising of Chairman, Vice Chairman, Managing Director, Executive Directors and Non-Executive Directors].
2. Executive Committee (consisting of Managing Director/ Chief Executive and the Executive Directors).
3. General Managers
4. Deputy General Managers
5. Assistant General Managers
6. Principal Managers
7. Senior Managers
8. Managers/Branch Managers
9. Others

The Hierarchy is from 1 to 9.

(L) What is your Branch structure?

Answers from all interviewed are set below:-

1. Branch Manager
2. Assistant Manager
3. Sub-Managers
4. Officers 'A'
5. Officers 'B'
6. Supervisors
7. Clerks/Typists
8. Drivers/Messengers
9. Gardeners/Cleaners

The Hierarchy is 1 to 9.

The interview, with the cross-section of the members of staff, was not easy though much was realised and this helped in the carrying out of this project. The questions and answers session improved the knowledge of the interviewer and introduced him to the Branch procedure. The suggestion by the persons interviewed in relation to changes to be effected and their readiness for a full computerisation was taken into consideration for the computerisation aim at.

From the interview, there is revelation which shows that exposure to training matters a lot and makes a difference between a novice and the trained. Those who are exposed to one computer training or another were not averse to computerisation. However, those who welcome computerisation though yet to be trained are not comfortable with its introduction.

It is necessary to train users and would-be users - over again considering the fact that revisions are being made as developments occur.

3:3 RECORD REVIEW:

Record Review means inspection of records to obtain knowledge of the existing procedure, hence the study of organisational charts, procedure, manuals, statistics, reports etc. The records of United Bank for Africa Plc, Minna were studied and reviewed. Having gained knowledge of the current system, the new system became easy to construct. All documents were keyed into files created in the computer.

The undermentioned were inspected:-

- The staff work plan of the Branch
- The training schedules for past and present courses
- The records of staff appraisal
- The records on past and current Departmental movements
- The cost on staff
- Staff circulars
- Instruction manuals

3:4 OBSERVATION:

Observation means being in the work-place with the workers, see what they are doing and ask questions. First hand knowledge is thereby obtained. Observation enables first hand knowledge of the practical aspect to be obtained. This method is used along with other methods to achieve optimum result.

Every document is observed during the process of what looks like on-the-job training and assessment. The interviewer had the opportunity of sitting down with workers, assessing their jobs, asking questions on why certain procedures were embarked upon and why the reverses were not the cases etc.

The employment forms of a sample of members of staff were observed. Such blank forms do not exist in the Branch, so no specimen was allowed to be removed as staff-names were on them. Employment exercises of workers were not carried out in the Branch but either at Regional Office level or Head Office level depending on the category of such member of staff. However, information like addresses, qualifications, schools and Universities attended, previous employment, names of parents, marital status, etc were required. Forms which contain similar information requirements as above exist. They are for updating of file/record. Mostly, the documents observed were letters written to members of staff by Regional Office or Head Office and copies of letters written to these authorities by the members of staff.

Documents were either filed haphazardly, misfiled or not filed. Copies of appraisal forms were not found in the files of members of staff.

3:5 QUESTIONNAIRE:

This method of gathering data was not used in this project. This is because it is usually useful only when information is required from a great number of persons and when many different geographical areas are involved. The situation involved in this study does not call for such method.

The situation involved is data collection in a small section of the Branch and the number of persons involved is not too large for this interview method to be applied.

CHAPTER 4 - ANALYSIS AND SYSTEM DESIGN

4.1 DATA ANALYSIS.

Data can be described as the raw material of a large proportion of purposeful computing. Hence, the reason data is important when information processing is discussed. The proper and well organised data leads to efficient and successful computing and it becomes otherwise for an unplanned and unorganised data.

Data Analysis can be related to the source of data and the fundamental relationships between data. Data is the values of properties or characteristics of entities (things) that are permanently and structurally important in a particular situation. For instance, where services are provided for customers, the important entities:-

- The services being provided
- The stock in trade (Cash)
- The supplier of the cash (CBN)
- The source (security & Minting Company) of the cash to CBN
- The persons who use the cash (An individual person, the customers, a firm, Company, Government and Parastatls etc)
- The members of staff engaged in provision of services.

Every occurrence of an entity can be identified by either fixed or changeable properties, for instance, the entity "Customers" may have the following properties which do not change often.

- The name of the customer
- The customers' residential address
- The customers' official address
- The name of the customer's directors
- The name of Ministers, Commissioners etc of the State/Nation.

However there are changeable properties like:-

- The quantities and value of transactions for a particular period
- The value of deposits and number of depositors periodically
- The value of withdrawals and number of customers involved
- The number and value of customers who operate domiciliary Accounts periodically.
- The number of persons who do personal Home Remittances and the value thereof, for a particular period
- The number of customers who engage in International settlements and receipts of payment for Imports and Exports (Bills & Credits) and the value thereof.

- The number and value of telegraphic transfers, mail transfers etc carried out on behalf of customers.

No matter the circumstances the relevant entities are joined together by relationship which reveal themselves in important transactions or messages, the contents of which may affect a variety of interests, so that the entities "Cash" and "Customers" are connected by the following transactions:-

- The presentation at the counter of a cheque
- The payment of Cash by the Bank
- The return of the cheque for lack of funds in the account of the customer or for the reason it is.
- The application for foreign exchange by the customer
- The provision of the foreign currencies required/available
- The rejection of the application for improper documentation etc.

Also the important entities enumerated below occur when members of staff are to proceed on courses - though when they get their appointments confirmed, for instance, where members of staff are appraised, promoted, cautioned, warned, terminated, dismissed etc related entities are involved.

- Which courses are available at the Training School
- Who are to attend these courses
- When last have these members of staff attended courses
- What are the qualifications of the members of staff concerned
- Where the members of staff presently work
- When did the members of staff joined the Bank
- Etc.

These are permanent/unchangeable information required on each member of staff at each time of proceeding on a course when nominated.

The changeable properties at every occurrence of an entity include:-

- i) The numbers of staff to attend current account course for example
 - ii) The numbers of staff who would attend courses this quarter
 - iii) The list of School Certificate holders who would attend the courses this quarter
 - iv) The list of Graduates who are to attend the courses this quarter
- Etc.

"Members of staff" and 'Courses' to be attended are the entities that are connected to each other in the area of course attendance.

- The nomination of members of staff for specific courses.
- The nomination of members of staff for all courses
- The trainers they would meet
- The course organisers
- Etc.

4.2 DATA MODELLING/NORMALISATION.

Computer - based system requires data which are cleaned - up or in a normalised form to function. Data descriptors constitute what is sometimes called Logical Data Model (LDM) for the proposed system.

Data modelling segregates data into separate files or it integrates data structure when developing data base. Data normalisation is the initial requirement of data modelling, a process of separating items which are independent of one another into groups for recording in different files. Normalisation ensures that each file has a key which identifies the object that the data describe. Relationship between fields must be established e.g. relationship between key field (e.g. Employment Number) and other fields of an object.

The file structure is listed and normalised as follows:-

1. EMPLOYMENT DOCUMENT RECORD

- (a) Employee's Biodata
 - * Employee's Number
 - * Employee's Surname, Middle Name, First Name
 - * Assumption date
 - * Rank/Grade
 - * Salary Code
 - * Department Code
 - * Date of Birth
 - * Sex (M/F)
 - * Nationality Code
 - * State Code
 - * Contact Address
 - * Appointment Code

(b) EMPLOYEE FAMILY.

- * Employee Number
- * Marital Status
- * Spouse Name
- * Date of Birth
- i. Child Name Sex Date of Birth
- ii. Child Name Sex Date of Birth
- iii. Child Name Sex Date of Birth
- iv. Child Name Sex Date of Birth

(c) SCHOOLS ATTENDED.

Employee Number

- a. Primary School
- b. Secondary School
- c. Others

(d) Qualifications

(e) Referee/Next of kin/Former employer

- 2. Deployment records
- 3. Leave records
- 4. Confirmation records
- 5. Promotion records
- 6. Training records
- 7. Discipline records

A. Payroll Data

- Employee's Number
- Employee's Names
- Assumption Date
- Rank/Grade
- Department Code
- Monthly pay
- Tax Code
- Gross pay to date
- Bank Name
- Bank Code

- B. Personnel Data
 - Employee's Number
 - Employee's Name
 - Department Code
 - Educational
 - Home Address
 - Date Employed
 - Assumption Date
 - Rank/Grade
 - Date of Birth

- C. Employee Bank Code
 - Employee Name
 - Bank Code
 - Bank Name
 - Employee Bank Account Number

4.3 SYSTEM ANALYSIS.

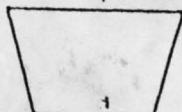
Analysis of the findings, at investigation stage, is carried out to ensure that the proposals of solutions are sieved for a solution. The facts gathered are examined to enable proper assessment of the existing system.

Problem has been established and the analysis stage sets out to solve the problem. The analyst found out what must be done to solve the problem. The current system must be analysed to bring out the strength and weaknesses to allow for solution. The correction of faults in the current system facilitates the emergence of a good system.

Instead of the manual way of filing documents, the documents are kept in folders and cabinets while the cabinets are occupying large space in the building, computer takes over almost every filing of the documents. Transfer or translation is done.

* Collection of the documents manually

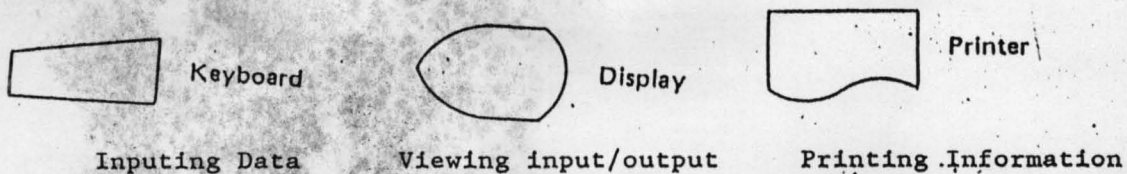
Manual operation



Disk



* Translation to Disk

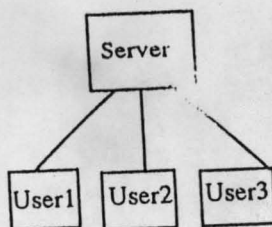


To make profitable use of the computer, it is necessary to adapt the functions of computing (input, output, processing, storage), embed them into the fabric of UBA's Administration whose efficiency we had set out to improve. The main part of this arrangement is called system analysis - ie.

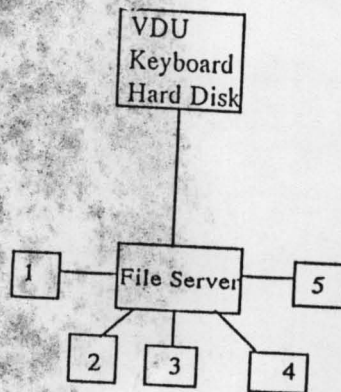
- The specifying
- The setting up
- The testing
- The evaluating of the system.

The proposed system is the elimination of faults discovered in the old system therefore, first of all, the file server is introduced, which creates the environment that enables every user of terminal (VDU & Keyboard) to input process, output, retrieve and view data/information. (At approved points) with the authorised users having a terminal to themselves. The file server enables the users to obtain information from the computer without delay as processes are fast. The VDU/Keyboards are fixed to the server enabling Net working.

Batch processing is eliminated in UBA Minna with the introduction of the new system. In batch processing, processing is allowed to commence at the end of the day while print-outs produced are for use in the following day. A situation which does not occur in the LOCAL AREA NETWORK as processing is interactive, that is, the operator feeds in the data and gets immediate response from the system.



The file server now allows VDU/Keyboard on the table of authorised persons (The Accounts Officer, The Commitment/Foreign Officer, The Entries Officer, The Savings Officer, The Cashiers, The Accountant, The Personnel Manager the Branch Manager), to access the CPU (Central Processing Unit) directly with results immediately produced.



The Personnel Manager feeds into the computer, with the new system, information on staff vis-a-vis appraisals (what, gradings), arrangement of courses and training, leave roster, movement of staff etc, which are printed when required. Time wastage, inaccurate information, storage problem & delayed reports, which have been a major problem with the manual filing are duly eliminated.

The Budget of UBA Plc certainly would be a limitation on the change being introduced. However, certain important requirements are expected to put the following things into shape.

- * The system should allow the operator to feed in data to obtain immediate response.
- * The system should allow operators to work on the computer from all points.
- * The system should allow the users interrogate the database about situation of the members of staff.
- * Reports should be generated automatically at specified periods e.g. quarterly. Reports for the Training to date.
- * Etc.
- * Interrogation from database need to satisfy queries of the type:
 - Employee Number
 - Name of employee
 - Home address of Employee
 - Etc.

- * The users of the system must be able to update the personnel database when changes occur.
- * The census of the members of staff should be easier at any given end of period, this reducing checking and counting of members of staff afresh at each end of period.
- * To maintain the security of the system, only privileged users such as the Branch Manager and Personnel Manager may alter the files. Anyother on the system may only read data from the files if at all. Therefore system of passwords are introduced.

Backup system is essential incase the disk becomes corrupted.

The total cost of the system may not be lower than N3million though it may be kept below N3.5million the old VDUs, Keyboard etc are taken into consideration in this system.

The breakdown of cost:-

* Server (1)	-	N1,300,000.00
* Workstation 486 DX	-	350,000.00
* Computers (8)	-	450,000.00
* UPS	-	100,000.00
* Stabilizers	-	50,000.00
* Printer SO 1170 (1)	-	90,000.00
* Installation Cost	-	50,000.00
* Training Cost	-	<u>50,000.00</u>
TOTAL	=	<u><u>N3,440,000.00</u></u> =====

The acquisition of these equipments may be made by Head Office, so immediate expenses shall not be borne by the Branch. Infact, no such expenses are borne directly by the Branch, so implementation is based on budget.

Special allocation could be made on behalf of the Branch by Head Office. The cost to the Bank cannot be quantified, as cost of maintenance of the old PCs and eventual replacement may be more than the immediate replacement and acquisition and implementation of this proposed system.

4.4 SYSTEM DESIGN.

Having analysed the system, design took over (creative ability is used here) the analyst used his judgement, skill and knowledge, to interpret the requirement specification (estimates for alternative designs) to create one or more system specification (which provides detailed documentation of the new system).

The main criteria is that the system being envisaged must be IBM compatible considering the computers being used since they are to be connected to a file server.

The Bank has three computer-terminals, one called "master" in which merging of transactions from the other two "terminals" are done. While the administrative update of Accounting activities is being processed in the "Master" and the Accounting activities are processed in the two "terminals". All transactions processed in these terminals are merged in the "Master" But these computers' programs are to be altered when changes occur. The PCs in the Computer-Room, would be reduced. The computerisation of the Administrative aspect of UBA Minna has come a long-way to improve the entire computerised section as the entire Branch would be computerised instead of the section intended.

The maximum capacity of the file server being envisaged is 80486DX 56[fifty six] megabyte, 66MH processor may be stored on any 16MB disk file server - RAM, 5VGA monitor.

The number of members of staff presented are 53. The information (as regards the number of bytes) need to be stored on each member of staff will be approximately 350 bytes. To create chance for increase in members of staff as this Branch is being considered for upgrading, addition of 7 brings the numbers to 60. The approximate size of the database needed on the 80486DX file server is 21,000 bytes (21KB) = (0.021MB).

To enable interrogation of a file by more than a user at a time, BASIC II is required as a standard language interpreter.

4.5 DESIGN OF FILES.

A file is a collection of records that are related in some way to each other - a complete unit of information - it consists of data stored in it and is usually structured in a specific way. File can be a collection of staff records arranged in some specific order, alphabetically by the name of the members of staff, the address of the members of staff, the outstanding leave period of the member of staff, "allowances yet to be

approved" for the member of staff etc

Programs e.g. PASCAL, BASIC are files too.

Before files are used, they must be created. It also follows that files cannot be designed if they do not exist. Design is necessary to put things right from the initial stage; otherwise the modification would set in at later stage. Modification is time consuming and expensive.

Random access may be used in the design of these files related to personnel records. This is to allow direct access to these files. Random Access is chosen to enable fast access to vast information. This method of accessing files would be more appropriate, rather ideally suited to disk-based system (as the system adopted) in this project.

File design, which enables transformation of data into outputs, allows grouping of data items as stored. It determines the number of data items, their format, the potential volume of files and how the files are processed whether batch or on-line.

The system for this computerisation is on-line with Local Area Networking in operation.

The file structure is of the form:

1. Name of file: Mast DBF - Master file for Personnel

Field Name	Type	Width	Dec.
S-Name	C	15	0
Other-name	C	15	0
Emp.-Number	N	4	0
Dept.-Number	N	4	0
Educ.-Qualification	C	15	0
Address	C	15	0
Etc.			

2. Name of file: Mast DBF - Master file for Payroll

Field Name	Type	Width	Dec
Emp.-Number	N	4	0
Emp.-Name	C	15	0
Dept.-Number	N	4	0
Monthly Pay	N	13	2

Tax Code	C	4	0
Gross Pay to date	N	13	2
Bank Name	C	10	0
Bank Code	N	4	0
Etc			

3. Name of file: Transaction DBF - Transaction file for Personnel.

Field Name	Type	Width	Dec
Empl. Bank Account	N	6	0
Empl. Name	C	15	0
Bank code	N	4	0
Gross Pay to date	N	13	2
Etc			

Master files are permanent files containing records vital to the running of the organisation's customers' files, Employee files, Impersonal files. Master files must be updated as long as changes occur.

Transaction files are temporary files containing records of the organisation taking place within specified period of time (daily, weekly, monthly) - The deposit of cash, withdrawal of cash by a customer, the change of address of an employee, the change of some information. Thereof, the expenses incurred on behalf of the Bank. These transactions are held within the transaction files. At the end of the period the files are used for up-dating the master files. [Employee Number, Employee Name, Department code, Age, Qualification]

Transaction file is empty at the end of the day, the input of the transaction enables a transaction record to be created and written on the transaction file.

4.5.1 FILE SPECIFICATION.

Data files are created to facilitate the generation of output. The medium used is magnetic disk (floppy and hard disks).

To ensure proper storage, data are organised as:-

FIELD NAME	
FIELD TYPE	- Character, Numeric, Logic Etc
FIELD WIDTH	-
FIELD DECIMAL	- The number of decimal places where numeric is involved especially Amounts.

The Specification:-

FIELD NAME	TYPE	WIDTH	DEC
EMP. NO.	NUMERIC	5	0
SURNAME	CHARACTER	20	0
INITIALS	CHARACTER	15	0
ASSUMP. DATE	DATE	8	0
GRADE	NUMERIC	2	0
DESIGNATION	CHARACTER	10	0
SALARY	NUMERIC	6	2
D.O. BIRTH	NUMERIC	8	0
AGE	NUMERIC	2	0
SEX	CHARACTER	1	0
L.G.A.	CHARACTER	20	0
STATE	CHARACTER	20	0
NATIONALITY	CHARACTER	20	0
BIRTH PLACE	CHARACTER	20	0
DEPARTMENT	CHARACTER	12	0
CONTACT ADDRESS	CHARACTER	20	0
PRESENT ADDRESS	CHARACTER	20	0
MARI STATUS	CHARACTER	1	0
SPOUSENAM	CHARACTER	20	0
SPOUSE DOB	DATE	8	0
NEXT OF KIN	CHARACTER	20	0
EMP. QUAL.	CHARACTER	20	0
LAST BRANCH	CHARACTER	20	0
PRESENT POSTING	CHARACTER	20	0
DOL LEAVE	DATE	8	0
DOCONF	DATE	8	0
DOLP	DATE	8	0
DOLT	DATE	8	0
LAST TRAINING	CHARACTER	12	0
LAST DISCIPLINE	CHARACTER	12	0

KEY

EMP. NO.	=	EMPLOYEE NUMER
ASSUMP DAT.	=	ASSUMPTION DATE
DO BIRTH	=	DATE OF BIRTH
LGA	=	LOCAL GOVERNMENT AREA
MARI STATUS	=	MARITAL STATUS
SPOUSE NAM	=	SPOUSE NAME
SPOUSE DOB	=	SPOUSE DATE OF BIRTH
EMP. QUALI.	=	EMPLOYEE QUALIFICATION
DOL LEAVE	=	DATE OF LAST LEAVE
DOCONF	=	DATE OF CONFIRMATION
DOLP	=	DATE OF LAST PROMOTION
DOLT	=	DATE OF LAST TRAINING
PP	=	PRESENT POSTING

REQUIRED OUTPUT.

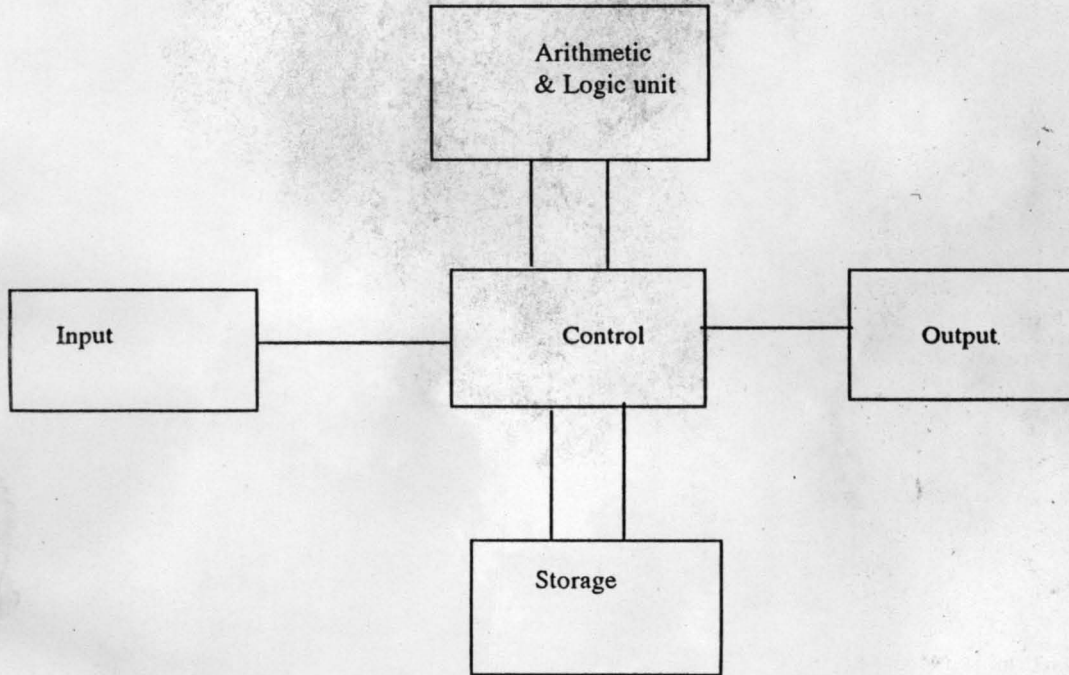
- 1) The list of members of staff presently working in the Branch, in order of seniority.
- 2) The list of members of staff transferred out of the Branch (in order of seniority)/or date.
- 3) Personal biodata, family, medical records.
- 4) List of members of staff who resigned, retired, died and those who have their appointments terminated, dismissed etc.
- 5) The list of last leave attended, promotion, confirmation, training.

4.6 DESIGN OF CONTROL.

Control is designed in the system to prevent unauthorised access. Control is in many forms of which the major form of control; restrictive access to the computer room which houses the File Server, and other Computer System [VDU, Keyboard, Giant printer, stabilizer]. At the Computer Room, where the system Supervisor stays to work, the entire LAN is controlled. Time is allocated to other users. The System Supervisor allocates passwords to the users as those without passwords may not access the computer. Those who have passwords may be unable to access other operations.

Passwords grant the authority to users who view or key data into the Computer.

FUNCTIONAL COMPONENTS PARTS OF A COMPUTER



5.1 IMPLEMENTATION.

This bothers on the co-ordination and collaboration of efforts by the user department and the Data Processing department in getting the new system into operation. The System Analyst involved in the design of the new system must participate to enable proper conversion from the Old System. This is because he has the entire knowledge of the system.

The Management of the Bank at this stage must have agreed on the new system which consists of the server, the Work Station [end of day processing] UPS [Uninterrupted - Power Supply], Stabilizers, Printers, before the purchases of these equipments are made. The user departments have been made ready for what they should expect to enable them prepare for the change.

The Data Processing Department would have got their members of staff (Programmers) to write programs if they would accept generalised programs. Infact, the Bank make use of their own staff to modify programs for its system.

5.2 TRAINING.

Most members of staff of this Branch have been trained both at the training schools and on-the-job. However, the few yet to be trained are to be sent to the Training Schools for training while the ones presently working on the computers shall be re-trained since adjustments have been made to the system they are used to.

5.3 CONVERSION.

This involves the change from Old System to the new system. There main methods of handling conversion:-

- Paralle method
- Direct method
- Pilot changeover method

Parallel method: A secured method of handling conversion, parallel method becomes useful if data must be kept intact until change-over is successful. The old system is used side by side with the new system hence, the name "Parallel". The uncertainties which plague the mind [because of the fear of the unknown] encourages the "Parallel" approach.

A fall back to the old system without loss of money, or time when the new system becomes difficult. So the teething problems are corrected before the new system is finally adopted. This method is not without demerits, as two systems [methods] are run in a parallel way double costs are involved - the ones who are averse to computerisation would gain the opportunity in falling back to the old system, even, maybe, for the negative plans of theirs.

However, a system which offers a safe arrangement is good.

DIRECT METHOD.

Direct conversion takes place with this method without the chances of falling back. This takes an overnight operation to transform the old system to a new one. Problems do occur in this method of changeover viz: the abrupt changeover leaves no room for testing of the new system hence any resistance to the change may sabotage by creating some problem that would take weeks to solve.

PILOT [APPROACH] CHANGEOVER.

Pilot changeover has to do with changing part of the system either in parallel or directly. That's, a section is first of all changed over though the old system of that section running side by side with the new system until it is sure that the section is free from set backs before the old system is discontinued. Also the section could be changed immediately without a gradual arrangement being operated - an overnight changeover of the section is done.

The method of changeover recommended for this Branch is the parallel method which has the advantage of falling back to the old [method] system in case of faults occurring which may debar progress. In this case, until the faults are checked no new system could be enforced.

However, Pilot changeover of the section of the Branch which is the Accounting section has been on and the progress of computing need not be over emphasized [at least from the interviews held with a cross section of the members of staff].

With a lot of home work, the parallel method should be applied. Direct method is not to be applied in a situation where much transactions are involved like this Branch.

5:4 POST IMPLEMENTATION REVIEW

Implementation of a system is not an end in itself but a beginning of some tasks. The Management need to ensure that continuity of the system is reviewed hence:

- Unforeseen problems arising in operation(e.g. program may need to be modified to deal with unforeseen circumstances) must be dealt with.
- Confirmation that the planned objectives are being met and action taken if they are not met.
- Ensuring that the system is able to cope with the changing requirements of the business.

5:5 REVIEW METHODS

5:5:1 SOFTWARE DEVELOPMENT BY PROGRAMMERS AND ENGINEERS

A team of experts would write new packages for the existing or proposed systems. New operating systems are produced to enhance the power of the Organisation's Computers.

5:5:2 COMPONENTS OF HARDWARE BEING INVESTIGATED BY RESEARCH ENGINEERS

Research Engineers must work in conjunction with the Electronics Industry in developing new techniques for greater and faster performance.

5:6 COST AND BENEFITS

Trained Personnel for the delivery of good services and maintenance of good customer relationship enhancing good profit which keeps the Organisation in business emerge at the end of the day. Legal tussle in terms of court cases etc are reduced to the barest minimum thereby creating peace and eliminating loses for the Organisation, The Shareholders, Customers, Members of Staff enjoy the Organisation, thereby Central Bank Of Nigeria granting high rating to the Bank.

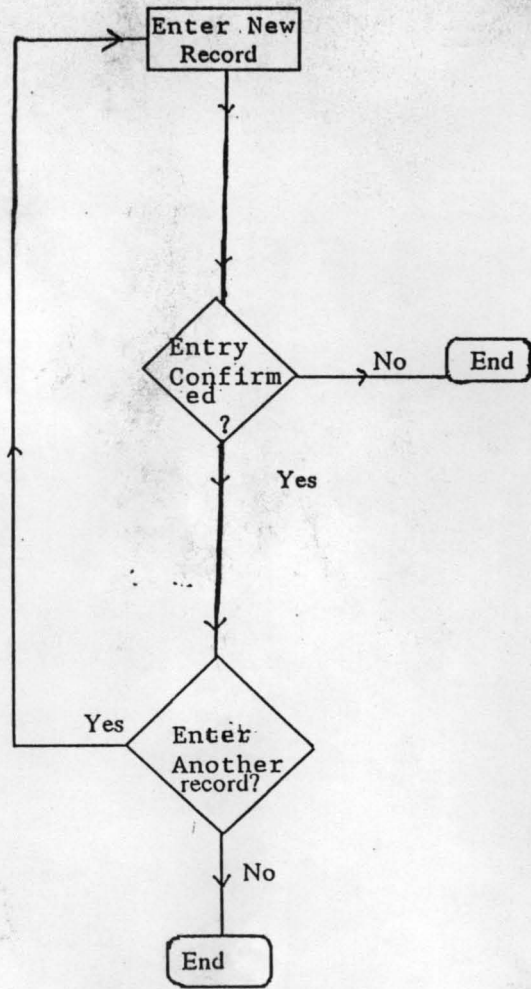
The cost expended in raising the standard of the Bank cannot be comparable with the benefits mentioned above. Either in the short-or-long run, benefits flow in by way of influx of high calibre of members of staff, acquisition of shares by Big Shots and Comfort enjoyed by Bank Management.

5:7 MAINTIENANCE

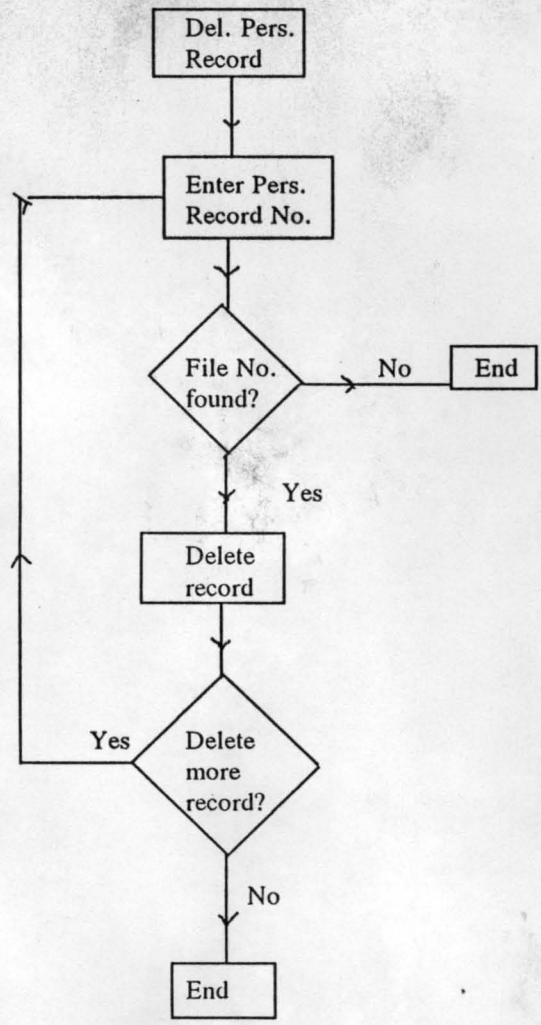
Engineers (Research Engineers), Programmers, etc are ever-ready to investigate and maintain the on-going system: Writing of programs, repairing and replacing of systems etc.

5:8 The computerisation of Minna Branch of UBA has improved the level of commitment and awareness of staff; the standard of customer services and prompt rendition of returns to its Head Office and Central Bank Of Nigeria; the profit of the Bank, there raising the profit-sharability of the Shareholders; raised the standard of the Bank on the Nigeria Stock Exchange and kept the Board of Directors at peace with the Shareholders.

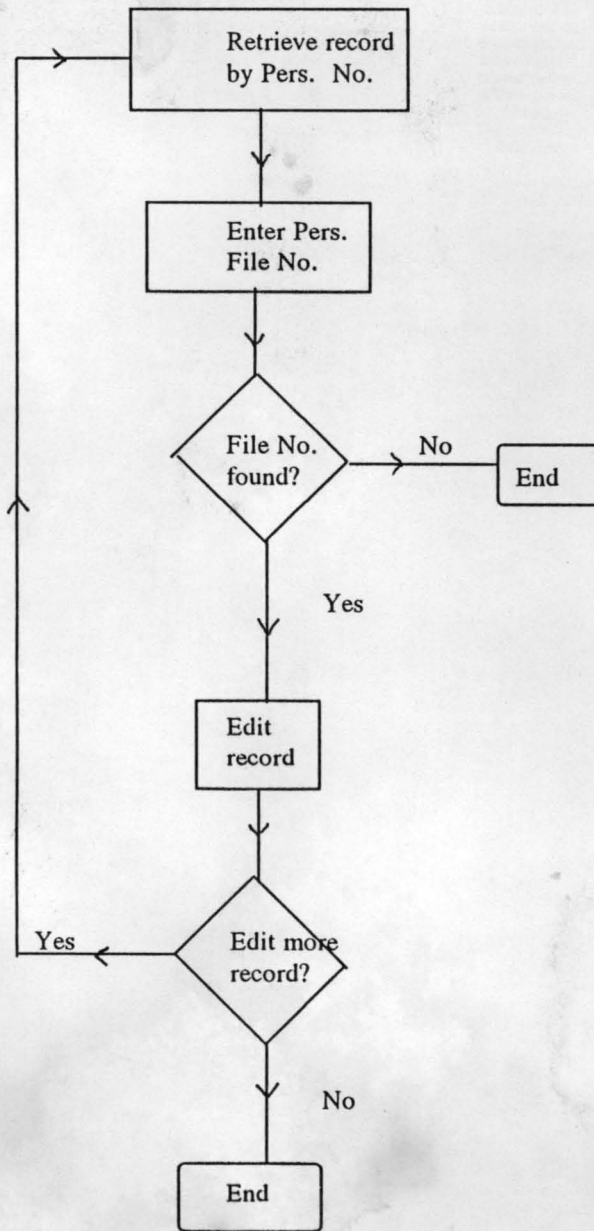
FLOW CHART FOR ADD PROGRAM



FLOW CHART FOR DELETE PROGRAM



FLOW CHART FOR EDIT PROGRAM



```
@ 3, 22 SAY "EMPLOYEE PERSONNEL DATA"  
@ 4, 24 SAY "DATA ENTRY SCREEN"  
@ 6, 1 SAY "FIRST NAME"  
@ 6, 14 GET PERSONNE->FIRST_NAME  
@ 6, 35 SAY "LAST NAME"  
@ 6, 47 GET PERSONNE->LAST_NAME PICTURE "XXXXXXXXXXXXXXXXXX"  
@ 8, 2 SAY "DATE OF BIRTH"  
@ 8, 17 GET PERSONNE->BIRTH_DATE FUNCTION "S07"  
@ 8, 27 SAY "APPOINTMENT DATE"  
@ 8, 44 GET PERSONNE->APPT_DATE  
@ 8, 54 SAY "AGE"  
@ 8, 61 GET PERSONNE->AGE  
@ 10, 2 SAY "MARITAL STATUS"  
@ 10, 17 GET PERSONNE->MARIT_ST__  
@ 10, 26 SAY "DEPARTMENT"  
@ 10, 38 GET PERSONNE->DEPARTMENT  
@ 12, 2 SAY "PFNO"  
@ 12, 8 GET PERSONNE->PFNO  
@ 12, 17 SAY "CONTACT ADDRESS"  
@ 12, 35 GET PERSONNE->CONTACT_AD  
@ 14, 7 SAY "PRESENT ADDRESS"  
@ 14, 27 GET PERSONNE->PRESENT_AD  
@ 16, 17 SAY "GRADE LEVEL"  
@ 16, 32 GET PERSONNE->GRADE_LEVL PICTURE "9999"  
@ 16, 43 SAY "STEPS"  
@ 16, 51 GET PERSONNE->STEPS  
@ 18, 1 SAY "BASIC SALARY"  
@ 18, 15 GET PERSONNE->BASIC_SAL  
@ 18, 26 SAY "DESIGNATION"  
@ 18, 39 GET PERSONNE->DESIGNATIO FUNCTION "S28"  
@ 20, 2 SAY "STATE OF ORIGIN"  
@ 20, 21 GET PERSONNE->STATE_ORIG  
@ 20, 41 SAY "COUNTRY"  
@ 20, 52 GET PERSONNE->COUNTRY  
*@ 19, 0 TO 20, 78  
@ 0, 17 TO 3, 48 DOUBLE  
@ 3, 0 TO 21, 68
```

Structure for database: A:personne.dbf

Number of data records: 46

Date of last update : 01/01/80

Field	Field Name	Type	Width	Dec
1	FIRST_NAME	Character	15	
2	LAST_NAME	Character	15	
3	PFNO	Character	8	
4	BIRTH_DATE	Date	8	
5	APPT_DATE	Date	8	
6	AGE	Numeric	3	
7	MARIT_ST__	Character	7	
8	DEPARTMENT	Character	20	
9	CONTACT_AD	Character	30	
10	PRESENT_AD	Character	30	
11	GRADE_LEVL	Numeric	4	
12	STEPS	Numeric	3	
13	BASIC_SAL	Numeric	8	2
14	DESIGNATIO	Character	30	
15	STATE_ORIG	Character	15	
16	COUNTRY	Character	15	
**	Total	**	220	


```
set talk off
set scoreboard off
@ 11,0
Wait "Press Any Key to begin entering new records"
Use personne
Begin =Reccount()
startadd=.t.
do while startadd
clear
Append Blank
do while .t.
Set format to  personne
Read
close format
entry = ' '
@23,25 say 'Entry Confirmed? [Y/N]'get entry
read
IF UPPER(ENTRY) = "Y"
EXIT
endif
enddo
con=.t.
@23,0 CLEA
@ 23,25 SAY "*** Record Entered ***"
@ 24,23 SAY "Enter Another Record?[Y/N]" Get con pict "Y"
Read
If Con
Clear
Loop
Else
Clear
Exit
Endif
Enddo
Clear
@ 11, 0 Say "you have added " + ltrim(str(reccount()-begin,10));
+ " records."
Wait "Press Any Key to exit entry Program."
Close Database
set talk on
set scoreboard on
```

```
CLEAR
SET TALK OFF
SET SCOREBOARD OFF
USE PERSONNE
EXPENTER = .T.
DO WHILE EXPENTER
CLEAR
@ 5, 20 SAY "RETRIEVE RECORD BY PERSONAL FILE NO"
KEY = SPACE(10)
@10, 10 SAY "ENTER PERSONALFILE NO" GET KEY PICT "@10!"
READ
IF KEY=SPACE(10)
EXIT
ENDIF
LOCATE FOR PFNO=TRIM(KEY)
IF FOUND()
SET FORMAT TO PERSONNE
READ
CLOSE FORMAT
ELSE
WAIT "***NOT FOUND***PRESS ANY KEY TO CONTINUE"
CLEAR
ENDIF
```

```

MORE=.1.
@24, 5 SAY "EDIT MORE RECORD (Y/N)?"GET MORE PICTURE "Y"
READ
IF MORE
CLEAR
LOOP
ELSE
CLEAR
RETURN
ENDIF

```

```

ENDDO
CLOSE DATABASE
SET TALK ON
SET SCOREBOARD ON
RETURN

```

```

CLEAR
SET TALK OFF
SET SCOREBOARD OFF
SET STATUS OFF
USE PERSONNE.DBF
RABBIT = .T.
DO WHILE RABBIT
  CLEAR
  @ 10,20 SAY "DELETE PERSONNE RECORD"
  HARE = SPACE(10)
  @12,20 SAY "ENTER PERSONAL FILE NO " GET HARE PICT "@10!"
  READ
  IF HARE =SPACE(10)
    EXIT
  ENDIF
  LOCATE FOR PFNO = TRIM(HARE)
  IF .NOT. FOUND()
    WAIT '**NOT FOUND ** PRESS RETURN KEY TO CONTINUE **** '
  LOOP
  ENDIF
  CLEAR
DO DELET.FMT
DEL = ' '
@23,5 SAY "DO YOU WANT TO DELETE THIS RECORD?(Y/N)" GET DEL
READ
IF UPPER (DEL)='Y'
@23,0 CLEAR
SURE = ' '
@24,5 SAY 'ARE YOU SURE?(Y/N)' GET SURE
READ
IF UPPER(SURE)='Y'
DELETE
PACK
ENDIF
ENDIF
@23,0 CLEAR
@24,32 SAY "DELETE MORE RECORD (Y/N)?" GET RABBIT
READ
ENDDO
CLOSE DATABASE
SET TALK ON
SET SCOREBOARD ON
SET STATUS ON
RETURN

```

```

set talk off
set scoreboard off
set status off
use personne
Date = date( )
pno = 1
sno = 1
R = 1

```

```

do while .not. eof( )
  if R=1
    @ r, 10 say "UNITED BANK FOR AFRICA PLC , MINNA"
    R = R + 1
    @ r, 22 say "Data Entry Form "
    r = r + 3
    @ r, 2 say "Date"
    @ r, 11 say date
    r = r + 1
    @ r, 2 say "Page No ... "
    @ r, 12 say str(pno ,4 )
    r = r + 2
    @ r, 1 say "S/No "
    @ r, 8 say "First Name "
    @ r, 25 say "Last Name "
    @ r, 42 say " PF No "
    @ r, 60 say " Basic Sal. "
    r = r + 2
  endif

```

```

endif
  @ r, 1 say str( sno , 4 )
  @ r, 8 say first_name
  @ r, 25 say last_name
  @ r, 42 say pfno
  @ r, 60 say basic_sal pict "999,999.99 "
  r = r + 1
  sno = sno + 1
  skip

```

```

if r = 60
  wait
  r = 1
  pno = pno + 1
  clear
endif

```

```

if eof( )
  clear
  @ 10, 4
  pr = .t.
  @ 10 , 10 say " do you want to print (Y/N) ?" get pr
  read

```

```

if pr
  set print on
  set device to print
  loop
endif

```

```

exit
endif

```

```

endif
endif
enddo
wait
clear

```