COMPUTERIZATION OF VOTER'S REGISTER

BY

AKINYEMI EMMANUEL LANRE
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APPROVAL PAGE

This project has been read and approved as meeting the requirement of the Department of Mathematics and Computer Science, Federal University of Technology,(FUT) Minna, Niger State.

....
Mal. Audu Isah   Date
Project Supervisor

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Dr. S.A. Reju   Date
Head of Department

....
External Examiner   Date

DEDICATION

This project work is dedicated to my late Father, Mr. M.I. Akinyemi

ACKNOWLEDGEMENT

I wish to give my profound gratitude to God Almighty for giving me all it takes to accomplish this course.

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I thank you all and may God bless.

ABSTRACT

Votersregister is a comprehensive list of eligible voter's in a constituency. It contains items of information about the voter. This information authenticates the right to vote. Voting in Nigeria has been marred in the past by every allegation available thus resulting into violence, chaos, and wantom destruction of lives and properties. This study has considered the process of automating the register to eliminate the defects of the old practice which is slow, cumbersome, with high error rate, and the loopholes for fraudulent practices.

The data used for this study were obtained through observation and record inspection. The programming language used was Dbase III plus. This was chosen for it's versatility and user's friendliness.

The new system designed meant for the National Electoral Commission (INEC) and can be useful for other organizations like the National Population Commission, and National Civil Registry, etc.

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CHAPTER ONE

1.0 General Introduction

1.1 Elections

Elections as defined in Webster's dictionary as an "act or process of electing especially of choosing by vote" this will be discussed in this order.

(A)   Global Perspective.

Elections and electoral process has become a universally accepted means through which government of Nations are changed without violence. Throughout history, societies have had some form of leadership. The most popular of all is that leadership choosen by citizen who have attain the universal suffrage age, resident within that geographical region. This is achieved through the process of election conducted by an Electoral Commission established by the provision of the nations constitution. The electoral commission is usually charged with the following responsibilities.

(1)   To delimit the country into various consitituencies or wards

(2)   They train and recruit all electoral officials.

(3)   They provide all electoral materials for the election such as ballot boxes, ballot papers e.t.c.

(4)   They conduct elections into various tier of government.

(5)   They provide grant or fund to political parties.

(6)   They are also responsible for the registration of political parties.

(7)   They educate the electorate on how to vote during the elections.

(8)   They provide adequate security for all electoral materials and their movements during and after the conduct of elections.

(9)   They register and screen candidates for elections and

(10)   They announce the results of elections.

provided for in the constitution of the Federal Republic of Nigeria 1979. This election was not without some degree of chaos and violence. The chaos was more pronounced when the government of the day conducted another election in 1983 and remain in power for it's second term. This second term was short – lived by another military coup. The election was marred with allegation of rigging, forgery and other forms of mal-practices. There have been other attempts to return the country to civil rule. But the elections conducted by the military were not free from accusation of lack of credibility and widespread manipulation.

The computerization of the voters registration; the cornerstone of the electoral process will give the much desired confidence in the electoral process as it will eliminate to the barest minimum and possibly all the loop holes that are often abuse for various mal-practices.

1.2   OBJECTIVES OF THE STUDY

The main objectives of this study are:

(1)   To investigate the various problem experienced in the compilation of voters register .

(2)   To investigate the problem associated with the register during the conduct of elections.

(3)   To draws up the analysis that will be used to computerize the system .

(4)   To write all necessary programs that will be required for the computerization.

(5)   And finally to suggest the change over method, maintenance and the manpower training for the new system.

1.3 SIGNIFICANCE OF THE STUDY.

This research work will play a prominent role in the assessment of the registration of voters eroding the elections of the various loop-holes which

```` The process of election is in line with the issue of reform and democratization of the United Nation. This is a continous process and is constant with the rapid changes taking place in the world. The process of election has for long been automated by matured or civilized democracies and the culminating effect has always been an enhancement of its validity and widespread acceptability.

(B)      Elections in Nigeria

Elections in Nigeria has been the responsibility of various electoral commission usually established by the Government of the day under the provision of the constitution. There were elections conducted during the colonial rule which ushered in the government at independence.

In March 1953, chief Anthony Enahoro, an Action Group member, in the then mid – western Nigeria sponsored a motion requesting the house of representatives to endorse as a primary political objective, the attainment of self government for Nigeria in 1956. Although this motion was defeated, it underlined the nascent political consciousness of Nigeria people.

Nigeria eventually secured what is now referred to as flag political independence in 1960. The democratic structure installed by colonial authority unfortunately could not cope with the challenges and the crystallization of emergent class interest.

The Nation was plunged in to a prolonged internecine; these events led to a military coup in January 1966, and an eventual civil war which lasted a period of two and half years. At the end of the war in 1970, the military still remain in power until in 1979 when we had our first post – war that is the first republic election which was conducted by the Electoral commission established called Federal Electoral Commission acronyn (FEDECO) Headed by a retired Justice Ovie Whiskey. It establishment was adequately

have always discredits election results, making the results unacceptable to the defeated opposition party and the attendant chaos and violence.

It will also help the government of the country have an idea of the age distribution of her citizens which could be used for planning purposes.

The main significance of the study include:

(1)    Proper co-ordination of the voters register which will lead to data integration;

(2)    Reduction of data redundancy.

(3)    Elimination of data duplication

(4)    Better management of data through the enforcement of database standard for all users, since data will be centrally controlled.

To provide sufficient security of data.

## 1.4 SCOPE OF THE STUDY

The scope of this study is the computerization of the voters register being conducted by the National Electoral Commission. It therefore follows that the data collection and the research findings will be limited to the National Electoral Commission. However, it should be noted that the commission conduct election in the following procedure:

(1) Registration of voter and review of voters register.

(2) Voting .

(3) Counting and Collation of votes.

The success of the entire process depend greatly on the validity of the voters register, computerization of the compilation, retrieval and storage for the purpose of election is the focus of this study.

## 1.5 METHODOLOGY

The various methods of gathering information include observation, record searching, special purpose records, searching, questionaires and

interviewing.

In this study, we have adopted the methods of observation, interviewing and record inspection. These three methods were found suitable for this projects with the following considerations:

(1) The number of interviewers are not many and they were easily accessible, being officials of Electoral commission and

(2) Eligible voters within our locality, and the reseacher had the opportunity of participating in the registration exercise, thus having a personal experience as a registered eligible voter.

## 1.6 DEFINITION OF TERMS

For the purpose of clarity in study of this kind. It may be necessary to define some words and phrases used in the study. Such words and phrases include:

Election: The act or process of electing, esp. of choosing by vote. Process of electing representatives.

Vote: A formal expression of opinion, to decide, to establish.

Voters Register: It is a comprehensive list of eligible voters in a constituency. It contains items of information about the voter.

Voter: any person who is a citizen, who is not less than 18 years and whose name is listed in the voters register.

Voter's Card: Is the registration card which a voter obtains at the registration centre where he/she is registered as a voter.

INEC: An acronyn for Independent National Electoral Commission.

Computer: Is an electronic device that is capable of accepting data (input), storing, Processing the data and producing information (output) fastly, accurately and thus more efficient than human efforts.

System: Is defined as a collection of components either physically or non-

physical in nature which interact with one another towards achieving a common objectives.

Data: This term is used to describe basic fact about the activities of a business or new facts that are fed in to the computer for processing.

Information: Is data that have been processed into the form that is useful to the user.

File: Is a collection of meaningful information to which the user can attach a name.

NEC: An acronyn for National Electoral Commission.

# CHAPTER TWO

## 2.0 REVIEW OF LTERATURE

## 2.1 BRIEF HISTORY OF VOTER'S REGISTER

In Nigeria, We have had elections conducted in 1959, 1964, 1979 and 1983 using the secret ballot system; a system which presumes a voter as taking an important and sacred decision. Further elections were organized with the adoption of the open secret ballot system. While we do not intend to make analysis of each of these methods. It is however pertinent to note that the changes as a result of efforts by the electoral commission to correct mistakes and the loopholes of the previous experiments which had be characterized by agitation, violence, due to accusation of rigging, manipulation and several other vices connected with the ballot system.

The voters register from observation interviews and record inspections have shown that it is the heart of the election processes. Therefore the compilation of an accurate register is the very vital in conducting a free and fair elections.

The final list compiled for the purpose of election constitute the voters register, the register allows for citizen aged 18 years and above, residents within a geographical region referred to as a ward are expected to enlist and also cast their vote at this same region. But, because of the constant changes in the age distribution of citizen, citizen under age attain the voting age of 18 years and needed to be included on the list. Job opportunities among other reason relocates citizen from their areas of initial registration and thus needed to included in the register of their new ward and excluded from the former residency. There are cases of deceased citizens. All these factors

together form the basis for the revision of voter's register constantly before any election is conducted. The results of elections conducted must not exceed the number of registered voters. Otherwise this will invalidate the election result. From records, in all the previous elections conducted only about 40% of the registered voter present themselves for the election proper. Various reason have been attributed to this these include it's time factor, acts by officials resulting to a general apparent by the voters.

At this point, it is of interest to note that voter's register in Nigeria have never been maintained on a permanent basis, but are prepared prior to elections. Lists of voters are prepared manually at each registration centre, and are not further aggregated into a comprehensive register. The system does not allow for cross checks on names of individual voters. Registered voters are given personal voter's cards, which can only be used in a particular electoral exercise. No national identity card exists and other forms of documented identification are infrequent, voters usually get registered upon an individual declaration of identity. This has created opening for multiple registration, which could give room for multiple voting and ballot stuffing, as ghost entries on the registers are created.

Registration by proxy has been observed in the previous exercises. Allegedly committed by the local community leaders or political parties to enable them manipulate in their favour; the extent can not be ascertain without differently. There have been several cases arrest by the law enforcement agents. The high propensity of litigation associated with the previous elections pointed towards this. Almost any candidate who lost in an election contest the result in law courts, while some had eventually taken the law into their own hand having felt cheated. This had put to test the peace and stability of the nation.

These registration centres have been on the increased over the years to facilitate the smooth conduct. Each register is expected to contain a maximum of 500 voters. And there are currently over 111million registration centres.

The registration process gives room for feedback in the form of claims and objections before the final compilation of the voter's register. The tentative voters lists were displayed for voters inspection, most voters never care to inspect the registers display throughout the period ear masked for the objection and claims. In a society like ours where a lot of the eligible registered voter can not read or write. For those who could read and write the procedure for objection and claims was said to be too complicated.

The register is required to be copied manually. This exercise is very laborious and unpleasant. The process has to be done repeatedly by the officials to make provision of fresh register for an each elections. There have been cases of incomplete registers, missing pages; some voters did not find their names in the register or the names did not match the corresponding register entry. There were also reports of the original register being used repeatedly contrary to laid down procedures thus making uncertain the number of accredited voters for an election.

The process of registration and it's attendant problems can be minimized or eliminated completely if the system is computerized i.e. the need for a sound data based. For efficiency, accuracy, fraud proof and continuity.

The automation of the registration of voters and other procedure of the elections jealously guarded by the adequate provisions of the constitution which we shall be discussing later in this chapter will provided the much desired peaceful, widespread acceptance election results for the growth and

stability of the democratic system of government which has eluded Nigeria for almost forty years now..

2.2 The laws and materials on the registration Exercise.

In order to lay a proper foundation for a durable democracy in Nigeria, the government had made adequate provisions of the law covering the electoral process at 1989, over fifteen legal enactment has been promulgated on the electoral activities lined up for the transition to civil period in Nigeria. The electoral commission has published the various laws.

Here we shall edit the registration aspect i.e. Electoral (registration, ETC. of voters Decree 1991) Decree No. 35. Section 1 to section 22.

1. – (1) Not withstanding the provisions of the Constitution of the Federal Republic of Nigeria or any other law, rule or regulation, the National Electoral Commission (hereafter in this Decree referred to as the "Commission") shall carry out the registration of persons qualified to vote and maintain and revise the register of voters compiled under this Decree.

(2) A person shall be eligible to be registered as a voter in the area where he resides if-

(a) he is a citizen of Nigeria;

(b) he is resident in Nigeria;

(c) He has attained the minimum age of eighteen years.

(3) The Commission shall compile a new register of voters from a preliminary list of voters obtained from the registration of all persons qualified to vote, and any other manner as the Commission may think fit.

(4) A registration officer or an assistant registration officer and any person authorized by him shall, for any purpose connected with the registration of voters, be present at the registration centre between the hours

of 8 o' clock in the morning and 6 o' clock in the evening and may make such enquiries as may be deemed necessary for the performance of his duties.

(5) Any of the persons referred to in subsection (4) of this section engaged in the registration of voters shall carry an identity card provided by the Commission as evidence of his authority to register voters residing in the registration unit.

(6) A person engaged in the registration of voters shall, in respect of his unit-

(a) exercise the utmost care in preparing the list of voters to be known as the preliminary list; and

(b) Take all necessary precautions to ensure that the preliminary list, when completed, contains the principal names by which every registered voter is usually or may be known and his address, and that the list does not contain the name of any person who is not qualified to vote.

(7) Every preliminary list compiled under this Decree shall be displayed in the constituency to which it relates in such a manner and in such places as the Commission may direct and no register of voters shall be printed or used for the purpose of any election until all claims and objections have been dealt with in the prescribed manner.

(8) When the claims and objections to a preliminary list have been dealt with as required by section 8 of this Decree, it shall be printed in number of volumes which shall be bound and paged with the pages numbered consecutively, as directed by Commission and be published as the register of voters.

(9) The register of voters shall contain in respect of every person, the particulars required in Form EC.1A in the schedule to this Decree, including the principal name and such one or more other names by which a person is usually or may be known and his address which, for the purposes of this subsection, may be the name of a village or, in the case of a town, the name of the street, if the Commission think fit, but no person shall be registered under a principal name alone being a single name or without his address.

(10) A person whose name appears in the register of voters shall entitled to vote at any election conducted by the Commission.

2. (1) The register of voters in every constituency may be revised before any election.

(2) The Commission shall in any area in which a revision is to be carried out and in                                              ‹

Such manner as it think fit, invite applications, for inclusion in the register of voters, from persons claiming to be entitled because of age, change of residence or any other sufficient reason as the Commission may deem reasonable.

(3) An application for inclusion in the register of voters shall be in Form EC.1 in the schedule to this Decree and shall be made within, the time prescribed for such application, by the applicant in person; but if the applicant is an illiterate person any person who is literate may assist him.

(4) The registration officer shall include the names of persons to which subsection (2) of this section apply in a list to be known as the supplementary list.

(5) Supplementary list shall, with the existing register of voters comprise a new preliminary list and the provisions of this Decree as to the preliminary list shall apply and have effect accordingly.

3. - (1) The Commission shall issue registration cards in Form EC.1G in the schedule to this Decree to persons included in the preliminary list.

4. -(1) A political party may, by notice in writing by an officer of the appoint a person, in this Decree referred to as a "Registration Agent", to attend at each registration centre in the constituency where the registration of voters revision of the register of voters is being effected.

5. -(1) The Registration Agent shall-

    (a) ensure the good conduct of his party supporters during the registration or

Revision exercise.

    (b) Sign the certificate of daily registration in Form EC.1B in the schedule to this Decree at the end of each day.

    Provided that any failure to sign the said form shall not invalidate the collation of

Registered voters for any such day.

6. -(1) The registration officer shall display the existing register of voters for a period of not less than 21 days at each registration centre or such other places within the constituency as the Commission thinks fit.

7. -(1) Where it is necessary to display any preliminary list under this Decree, the registration officer shall prepare copies of the whole or any part of the list, and shall display copies of the preliminary list in each registration centre and such other places within a constituency as the Commission thinks fit and each list shall bear the date of its display.

8. -(1) Any person eligible to be registered may, if his name is omitted or incorrectly stated in the preliminary list, claim within 12 days of the display of the preliminary list, by notice in writing to the registration officer

in form EC.2 in the schedule to this Decree, to have his name and address inserted or to have any such entry amended.

9. -(1) The Commission may appoint as a revising officer any fit person to hear and determine claims and objections to an entry in or omission from the preliminary list; and may appoint such number of other persons, as it thinks necessary to assist the revising officer.

10. -(10) Subject to the provisions of his Decree, the Commission may make rules prescribing the time for hearing any claim or objection and the procedure at the hearing.

11. -(1) the registration officer shall amend the preliminary list-

    (a) to give effect to a decision on any claim or objection; or

    (b) to delete any duplicate entry; or

    (c) to delete the names of persons who are dead or disqualified; or

    (d) To delete the names of persons who do not comply with the provisions of section 2 of this Decree.

12, -(1) The registration officer shall-

    (a) not later than 30 days from the date when the preliminary list was first displayed or within such extended period as the Commission may allow, make such corrections in the preliminary list as may be necessary; and

    (b) Number the names in the preliminary list in such manner as the Commission may direct; and after endorsing and signing a certificate of verification on the preliminary list, he shall forward the list to the Commission.

(2) The preliminary list shall be printed and published by the Commission on such date as the Commission, after considering any

alterations or amendments recommended by the appropriate registration officer, may deem fit.

(3) For the purpose of this section, the preliminary list shall be deemed to be printed if it is produced in a visible form by lithography or any means, which the Commission considers expedient in the circumstances.

13. -(1) The preliminary list in respect of each of each constituency when printed and published by the Commission shall be the register of voters for that constituency; and a copy of the register of voters when published may be inspected free of charge by members of the public during normal office hours at such place in the constituency as the Commission shall, in writing, appoint.

(2) Copies of the register of voters shall be made available by the Commission to the political parties at such price, as it thinks reasonable.

14. -(1) Subject to the provisions of this Decree, where the Commission is satisfied that there is mistake in the register of voters it shall not later than 7 days before the date appointed for an election, give notice in such manner as it thinks fit of its intention to correct the mistake; and the correction may be made accordingly.

15. -(1) Any person eligible to register as a voter in any constituency but who was at the time of the registration or revision exercise unable to have his name included in the register of voters by reason of being out of Nigeria during the exercise or for any other cause as the Commission may deem reasonable in the circumstances, may apply to the Resident Electoral Commissioner of the state in which he is resident for name to be included in the register of voters in the constituency in which his resident.

(2) An application under the provisions of subsection (1) of this section shall be made not less than 30 days before nomination day in the constituency where the applicant is resident.

(3) The Resident Electoral Commissioner to whom an application is made under the provisions of this section shall cause applicant's name to be entered in the appropriate register of voters if he is satisfied that the applicant is resident in the registration unit his constituency.

(4) Every person whose name is entered in the register of voters for a constituency shall be entitled to vote at any election in the polling station or a voting area in which he is registered.

16. The register of voters shall be used for the purpose of determining the persons entitled to vote at every election to the office of the President and Vice president of the Federal Republic of Nigeria, the Governor and Deputy Governor of a State, the Mayor and Deputy Mayor of the Federal Capital Territory, Abuja, the Chairman and Deputy chairman of local Government, the National Assembly and House of Assembly of a state, the Mayoral Council of the Federal Capital Territory, Abuja, a Local Government Council and an Area Council of the Federal Capital Territory, Abuja.

17. Any person who-

(a) without lawful authority, destroys, mutilates, defaces or removes or make any alteration in any notice or document required for the purpose of registration or the revision of the register of voters under this Decree; or

(b) knowingly gives false information or makes false statement with reference to any application for inclusion of his name in the register of voters or with reference to any objection to the

retention or inclusion of the name of any person in the register of voters; or

(c) presents himself to be or does any act whereby he is by any name or description whatsoever, included in the register of voters for more than one unit in which he is entitled to be registered; or

(d) publishes any statement, rumour or report which he knows to be false or does not believe to be true so as to prevent persons who are qualified from applying for inclusion in the register of voters; or

(e) impedes or obstructs a registration officer or any person acting on his behalf in the performance of his duties; or

(f) Without proper authority, carries the identity card of a registration officer or assistant registration officer, is guilty of an offense and liable on conviction to imprisonment for a term of 2 years or to a fine of =N= 5,000 or to both such imprisonment and fine.

18. Any person who-

(a) entitled to a registration card, hands it, when received by him, to some person other than under this Decree; or

(b) not being an officer and acting in the course of his duty under this Decree, receives a registration card in the name of some other person; or

(c) without lawful exercise, has in his possession more than one registration card,

is guilty of an offense and liable on conviction to imprisonment for a term of 2 years or to a fine of =N= 5,000 or both such imprisonment and fine.

19. Any registration officer, assistant registration officer, revising officer, registration agent, member or staff of the Commission by whatever name called whom, without lawful authority-

(a) registers or aids the registration of any person by proxy or copies into the preliminary list the names and particulars of any person; or

(b) issues to any person more than one registration card; or

(c) issues to any political party a registration card; or

(d) includes any person in the register of voters for more than one unit or more than once in the register of voters for a unit in which he is entitled to register

is guilty of an offense and liable on conviction to imprisonment for a term of 5 years or to a fine of =N= 10,000 or to both such imprisonment and fine.

20. -(1) Any person to whom this section applies who is for the time being under duty to discharge any function relating to the registration of voters or revision of the register of voters is guilty of an offense, if he, without reasonable cause, before or during the registration of voters or revision of the register of voters or at any time thereafter-

(a) fails to perform or discharge such duty; or

(b) performs such duty fraudulently, negligently or recklessly; or

(c) Commits any act or omission in breach of such duty.

21. The forms set out in the schedule to this Decree or such other forms as may be designed by the Commission, from time to time, may be used for the purposes of this Decree.

22. This Decree may be cited as the Elections (Registration, etc. Voters) 1991.

## 2.3 Function of the electoral Personnel

For an effective conduct of the registration process, the electoral commission has

assigned various schedules to all categories of officials including the ad – hoc, auxiliary staff. Their functions is published by the commission

(a) Resident Electoral Commission as the chief Registration officer for the state supervises and directs the executive in the state by

(i) Ensuring the successful conduct of the registration exercise in the state.

(ii) Ensure that those recruited are adequately trained,

(iii) Administrator oath (using formEC.17) on all officers. - Electoral officers, Asst. Electoral officers who will participate in the exercise;

(iv) Supply adequate materials to Electoral officers for the exercise;

(v) Ensure that adequate publicity is mounted for the exercise.

(vi) Make all necessary contacts with government and other agencies.

(vii) Ensure that all logistics and security requirements are put in place;

(viii) Submit to the commission comprehensive report at the end of the exercise giving details of total number of persons registered, No. of official recruited, and used for the exercise and the effect of publicity on the extreme of the exercise.

(b) Registration/Electoral officer

(i) Location of suitable building at every ward in the Local Government Area (LGA) which shall serve as registration/display centres.

(ii) Procurement of tables and chairs to be used for the exercise.

(iii) Recruitment and training of all appropriate officer to be engaged in the exercise.

(iv) Receipt and distribution of all material to be used in the registration.

(v) Ensure that all-necessary logistics and security arrangements are put in place.

(vi) Going round from ward to ward for as on – the – spot assessment with a view to taking actions.

(vii) Publication of Notice for hearing of claims and objections indicates the day, time place where claims and objections will be heard.

(viii) Hearing of claims and objections made by members of the public.

(ix) Carrying out deletion from and addition to the preliminary list after conducting the claims and objection as the case may be.

(x) Submitting a detailed report on the exercise to your Resident Electoral Commissioner.

(c) Assistant Electoral officer (Administrative officer)

Assist shall serve as an assistant to the Electoral officer in carrying out all his functions.

(d) Supervisory Assistant Registration officer (SARO)

The SARO perform the following duties

(i) Supervise not more than 10registration centre unless directed otherwise by the Resident Electoral Commissioner.

(ii) Collect forms and materials from the Electoral officer for distribution to Assist Reg. officer under his area.

(iii) Collect duly completed forms i.e. EC.1A, EC.2, and EC.3 for submission to the Electoral officer for necessary processing.

(iv) Put up the notices or Hearing of claims and objections as they are issued by the electoral officer;

(v) Assist the Registration officer as he may direct with the Hearing of claims and objections.

(vi) Go round the registration centres under his supervision to attend to problems, (vii) Make sure the registration centre is always mannered throughout the day by ensuring the both AROs do not leave the registration centres at same time.

(viii) Collect unused form, materials and the displayed preliminary list for return to the Electoral officer.

(ix) Submit a daily report in

(a) The No. of persons who presents themselves for registration at the centre.

(b) No. of cards usher

(c) the No. of application and sundry claims.

(x) At the end of the registry exercise, submit a comprehensive report of the entire exercise to the Electoral officer.

(e) Assistant Registration Officer (ARO)
Shall function as follows

(i)     Taking delivery of all materials for the registration centre.

(ii)    Keeping the materials securely;

(iii)   Being at the registration centre punctually

(iv)    Prepare four copies of the preliminary list on form EC.1A that shall be handed over to the SARO, for submission to the Registration officer (Electoral officer).

(v)     Preparing the Display center for the exercise;

(vi)  Displaying the voter's registration conspicuously at the centre by 8.00 am during the period for claims and objections.

(vii)  Preserving the displayed voter's register,

(viii)  Attending to enquiries made the public at display centre or referring to the SARO where necessary.

2.4 Importance of the register in view of data processing.

Data processing is defined as the activity of converting raw facts (data) into information. Here we shall discuss briefly the relation of data processing to the need and uses of the voter's register.

. Since information is the result of processing data so that they become useful, usually for some decision-making activity the importance of data processing includes the following;

(i)  Data collecting, gathering original data to be enforced into the information system. Collecting new data is often called origination and     may be recorded on a source document. This relates to the personal biodata of the eligible voters.

(ii)  Recording - Expressing data in some form that is recognizable by person or machine.

(iii)  Sorting: - Arranging data alphabetically or numerically in ascending or descending order.

(iv)  Classifying - Arranging data according to some logical relationship. Classifying is based on some unifying characteristic of the data items.

(v)  Calculating: - Performing mathematical operations on data. Calculating and producing new data.

(vi)  Sorting and Retrieving – Recording data or information on storage media from which they may be retrieved when needed

and locating data and making them available for other processing activities.

(vii)   Summarizing – condensing data and information.

(viii)  Communicating – Transforming information and data from one place to another. Formatting information and data makes communication more effective.

Information processing make use of all the function of data processing in voters Register we have raw data being processed into information which are vital for the purpose of conducting elections. The voter register requires constant updating, deletion, retrieval and other features as narrated above.

## 2.4.1   Importance of the Register in view of election.

The register is the cornerstone of the electoral process. The major importance of

the voters register is its serving as a guide during the conduct of election. Thus

(i)     It contains the names of those eligible to vote only.

(ii)    The register is reviewed to delete the names of those who have left the area or dead and to include the names of those who have attain the voting age.

(iii)   Its is also important in the determination of the officials and materials that will be needed for the election.

(iv)    In determining either to merge or enlarge some polling area.

(v)     It helps the political parties prepare for elections such as in determining the no. of political party agents needed during the elections.

(vi)   It also enable the government of the country have an idea of the age distribution of her citizen which could be used for planning purposes.

# CHAPTER THREE

## 3.0 <u>SYSTEM ANALYSIS AND DESIGN</u>

## 3.1 <u>INTRODUCTION</u>

System Analysis is defined as the determination method of the use of computers with other resources to perform task that would meet an organization requirement of information. This was an initial development as a specialized branch of organization and method (O&M); general approach to solving procedural problem.

Organization and method can be defined as the systematic analysis of selected procedural problems in order to produce alternatives, which will be more suitable technically and economically.

System analysis covers a sequence or series of stage; these stages are referred to as the system life cycle.

These stages include:

(i)     Problem Definition.

(ii)    Feasibility and Investigation.

(iii)   Investigation and Fact- Finding.

(iv)   Analysis .

(v)    System Design.

The design stage of the project will be focused on the full description of the new system. Here we attempt to discuss the system requirements and system specification .

## 3.2 <u>DEFINITION OF PROBLEM</u> .

The voters register forms the bedrock for the conduct of a free and fair election. This demand maximum level of accuracy. The registration process mandate include among other:

(i)     To clearly define eligibility to vote and be regarded as definitive on settling any dispute about eligibility.

(ii)    To serve as a control device to deter effort of voters impersonation, multiple voting and ballot box stuffing .

(iii)   As a public document, to assist political parties and civic groups in communicating effectively with their constituencies.

(iv)    The register will also serve as a yardstick for the inventory and distribution of balloting equipment and supplies to polling station.

To achieve a successful registration exercise and conduct of free and fair election efficiently, there is the need for efficient storage device and effective channel of information dissemination within the organization charged with this responsibility. i.e the Electoral Body. consequently, the register of voters should be tHe type that can be easily accessed by the users and that which protect the information from unauthorised users. The present system has its inadequacies due to the following problems:

(a) Problems of Data Disintegration.

The present registration system is done manually, it is discentralized. Thus giving room for duplication in the registers. And because of the discentralisation, there exist no link of data across the organization.

(b) Problem of Data Security.

The present system gives room for unauthorized user to have access to information or abuse of information by fraudulent authorized persons.

(c) Problem of Data Redundancy.

This has posed to be major because a situation where a register is expected to be copied in quadruple manually, we discover a repetition of information and in some case omission of information on the pages of the voters register.

(d) Large Space Requirement.

The present system of register expected to contain a maximum of 500 data of voters in one booklet occupies large space in the offices where they are being kept, leaving very small space for office use.

(e) Large Quantities of stationeries are used.

For it's decentralized nature and manual system, considering the volume of work about 57 + million voters were registered in the last exercise nationwide, a lot of staioneries are used for record keeping. The duplications of data also amount to wastage of stationeries.

(f) Delay in Retrieval Record.

This is a major problem as observed in the course of registration. Intending voter spend too much time on the queue to verify their identity for accreditation before they are allowed eventually to vote. This has discouraged many voters who would after the accreditation exercise refuse to turn up for another queuing process for the proper vote casting.

## 3.2.1 FEASIBILITY STUDY.

The feasibility study is aimed at carrying out a preliminary investigation on the problem and to proffer alternative solutions.

In the course of the feasibility study, the cost benefit analysis for the alternative solution was conducted before recommendation was made to the electoral body on best alternative solution. In conducting the feasibility study, the principle of procedure was used to determine the strength and weaknesses of the current system.

These principles are:

(a) Purposes.

    (i)    Protection of document or information from unauthorized persons,

    (ii)    Easy and fast retrieval of records by users,

    (iii)    Reduce or eliminate data redundancy,

    (iv)    Allow for tidy office environment,

    (v)    Occupies less or little space.

    (vi)    Unfortunately, the present system is short of these purposes.

(b) Economically.

The present system is not in anyway economical. There is regular and high demand of stationeries. It also required a high population of human resources and their movements. Also required are shelves and cabinets.

(c) Workflow.

Current system work is unsatisfactory. It takes a lot of time and energy to process the data and the retrieval of information especially during the accreditation, a registration process prelude to the voting exercise.

(d) Flexibility.

The feasibility study shows that the current system was not flexible there is a very large collection of booklet register there is the problem of location.

(e) Reliability.

The investigation of this research confirms that the current system is not reliable. There existing some loop-holes which fraudulent electoral officers had accessed and capitalized. The security condition can only be described as fair. The sensitive nature of election cannot compromise any bit of insecurity. Mass movement of register involves many hands thus making it more probable to fraud.

(f) Time.

In respect of time, the current system is not satisfactory. As we have observed the length of time it takes to conduct the entry and retrieval of information produced for meaningful action to be taken.

## 3.2.2  TESTING PROJECT FEASIBILITY.

The feasibility of the project was tested with the consideration of the following.

(a) Operational feasibility.

This relates to the work- ability of the proposed computerized system of the Voters register of the Electoral Commission. From the feasibility study conducted through interview and observation, the study has the support of the Head of the Commission, the federal commissioners, resident commissioner at state level and above all the acceptance and financial support of the Nigerian Government has provided the need backing.

(b) Technical Feasibility.

Aimed at clarifying if the current equipment would be useful to the proposed system taking into consideration existing software technology and available personnel. The result of the feasibility carried out indicates that the current equipment and existing software

technology in the market are sufficient to cover the proposed system. However, the available personnel of the organization who will handle these equipment are insufficient.

(c) Economical Feasibility.

This feasibility test for financial and cost of implementing the proposed computerized system of the voter's register. The cost benefit analysis carried out, the result is given under 3:6, it shows that although the initial cost of equipment may seem to be high, the organization will derive a lot of financial benefit from the implementation of the new system.

3.2.3 INVESTIGATION.

The main objectives of the investigation are as follows:

(a) To conduct a comprehensive and more détailed study so as to understand fully the existing system of voter's registration and the register.

(b) To identify the basic information requirements. In carrying out this, this following have to be considered:

    (i)    The range of data type,

    (ii)    The volumes of data that are to be processed and exceptional conditions; and

    (iii)    Problems associated with the filling system.

3.3 THE CURRENT SYSTEM

A thorough investigation of the current system will enable us to determine the strengths and weakness of the system. It will also give credence and confirmation to the feasibility and sensibility to proceed with the computerization of the register of voters.

For eligibility, all citizen are expected to present themselves physically for inclusion in the register by supplying the registration officers with such relevant information as

(a) Name

(b) Age

(c) Address

(d) Occupation

(e) Sex

To produce an authentic voters register.

REQUIREMENTS: (1) Personnel

(a) Resident Electoral Commissioner (REC)/ Administrative secretary, Electoral officer / Registration officer (RO), Assistant Electoral officer (AEO), Supervisory Assistant Registration officer (SARO), Assistant Registration officers, (AROS) 2 no.), Party Agents. One for each political parties at each centre as observer

(b) Materials

    (i)     Tables and chairs

    (ii)    Writing material such as pens and Booklets of new voters cards

    (iii)   Stamps, pads, ink

    (iv)   Various form which include FORM EC. 1A, i.e. Registration form into which is entered names and particulars of all eligible voters who present themselves at the registration centre within a given period. This form when completed becomes the preliminary list. One copy for two of this preliminary list is display for two to three days for any objection or claim as the case may be. The register is

produce in numbers; a fresh register is being used for each stages of the election i.e. from council polls to the presidential elections.

There is also the FORM EC. 1G (The voter's card). The registration officer issues the voters card to every eligible voter who reports in person at the registration centre. And enter the following data in respect of each voter in both original and counter foil of the voter's card.

The data include: -

    (i)    Name of state and its code number.

    (ii)    Name of local government Area with its code No.

    (iii)    Name of ward with its code No.

    (iv)    Name of Registration Area with its code No.

    (v)    Registration unit with its code No.

    (vi)    Voter's Number

    (vii)    Voter's Name

    (viii)    Voter's Sex

    (ix)    Voter's Age

There is the FORM EC. 3.objection to name in the preliminary list. The form is issue to a person who wishes to raise objection to the inclusion of any person (s) whose name(s) and particulars appear in the preliminary list on display.

The ARO collects the completed form from the applicant and submit to the electoral officer through the SARO for necessary action.

## 3.4 COST AND BENEFIT ANALYSIS OF THE PROPOSED SYSTEM.

Although the initial cost of the proposed system may seem too costly, the level of work involved is equally enormous, and the long time effect will cushion the seemingly high cost.

The system has lots of both short term and long term cost benefit. The estimated cost of the proposed system will be discussed under two headings. These are: -

(a) Developmental cost; and

(b) Operating cost

(a) Developmental cost is concerned with the cost system analysis and design, software development and implementation, cost of computers, cost of printers, cost of stabilizers and Installation.

(i) System Analysis and Design     (   =N= 30 Million

(ii) Software Development and Implementation   40 Million

(iii) No. of Computers required about 1493   =N=298.6 Million

(iv) Wide and local network accessories   =N=7.465 Million

(v) Printers about 800 (laser jet and dot matrix)   =N=37.5 Million

(vi) Stabilizer   =N=8.958 Million

(vii) Installation   =N=14 Million

(viii) Staff Training   =N= 50 Million

  TOTAL COST   =N=486.523 Million

(b) Operating Cost

The operating cost is concern with the running cost. It includes the cost of stationeries, labour cost, equipment maintenance and miscellaneous expenses.

(i) Supply of materials (diskettes, printing papers)   N=29.86 Million

(ii) Labour cost One programmer and average of 90 operators    per

state                                                  ₦12 Million.


   (iii)Equipment maintenance                   ₦16.5 Million

   (iv)Miscellaneousexpenses                   ₦5.0 Million

       TOTAL                                   ₦52.36 Million

       GRAND TOTAL -                           ₦538.883 Million


## 3.5 Benefit Analysis of the Proposed New System

The proposed new system has both short and long term cost benefits. These cost benefits and advantages will be discussed under the following headings.

(1) Reduction in operational cost with the introduction of computer system. There will be:

  (i)    Less number of personnel during the registration exercise and the subsequent elections,

  (ii)    The volume of stationeries like files, Register Booklets, writing materials, inks, stamp and pad needed will reduced by almost 80%,

  (iii)    Storage equipment and store -room spaces, cabinet will no longer be necessary. These put together will save the electoral commission a substantial sum of money,

(2) Data Security.

The proposed new system gives guarantee for data security. This system will curb the movement of registers from one place to another

by personnel assistants and messenger. Thus preventing unauthorized user access to information.

(3) Retrieval of Data.

This is an essential part of the registration and voting exercise. The new systems provide for easy retrieval of data or information by the user.

(4) Reliability.

Since all unauthorized user will be denied access to information. The fear of distortion of information either by removal, additional or deleting for any kind of malpractice will not be possible. This will rest the much of the electoral commission.

(5) Flexibility.

Data entered or already stored data in the computer system could be analyzed and manipulated easily.

The proposed system has large accommodation for volumes of information and can be retrieved easily and very quickly without error.

(6) Data Redundancy.

This will be eliminated or reduced to the barest minimum. This usually occurs in same data appearing in more than one register or file often lead to wastage of storage space and duplication of efforts during data entry.

# CHAPTER FOUR

## 4.0 <u>Software Development and Implementation</u>

### 4.1    <u>Introduction</u>

This chapterwill focus on· software Development and Implementation. Discussion shall be on the requirement specification, choice of software package, and the elements of the software packages, input and output specification. We shall discuss the data structures of the input and output files and program development.

The implementation aspect deals on the operational manual, change- over, input and output specification.

## 4.2 <u>Requirement Specification for the proposed system</u>

This is an important aim of the analysis, to produce requirement specification, a description of what the system is required to do and how the system should be designed and implementation carried out.

The requirement will be divided into two. These are as follow:

(a) Hardware

PC: Pentium Y2k complaint

Memory: 10 MB:

Hard Disk: 4GB

Display: Monochrome/Colour

Disk drive: 3 1/2 inches

Printer

Stabilizer/UPS

CD ROM Drive

(b) Software

Disk Operating System (DOS) MS-DOS 6.0

Window operating System

DBMS package: Dbase III plus

Word Processing: Word Perfect 5.0

DBASE IV in Window.

## 4.3 INPUT AND OUTPUT SPECIFICATION

. Output Specification

We shall first consider what is required from the system before deciding how to set about producing it. For the purpose of determining the output requirements, consideration will need to be made on the form types, volumes, frequency of the reports and documents. Since the main concern of this study is on the Register of voters, we shall emphasize on the viewing of documents, updating of the files and producing of hard copies from any of the Input files when required.

For examples, hard copies may be required when there is external correspondence. For effective internal correspondence, the organization will need to have a Wide Network. Therefore the output file will be report in output file.

Therefore, for the purpose of this project, there will be thirty- seven files covering the thirty-six states of the federation and the Federal Capital Territory (FCT). for example, Anambra State will be ANAM. DBF, Yobe state YOBE. DBF, Kebbi state; KEBBI DBF.

## Input Specification

Consideration of input will be influenced greatly by the needs of output. In determining the input, consideration would be given to

(a) Collection of data methods and validation

     (a) Volume of input documents

     (b) Design of input documents

The input layouts are designed for convenience and better understanding. The input files will be group under 37 headings i.e. the 36 states and F.C.T. Each of the states groups will serve as sub directory for all the files under it these are:

Abia state file will have the sub- directory ABIA. DBF

| | |
|---|---|
| ADAMAWA | ADAM.DBF |
| AKWA IBOM | A/IBOM.DBF |
| ANAMBRA | ANAM. DBF |
| BAUCHI | BAUCHI.DBF |
| BAYELSA | BAYELSA. DBF |
| BENUE | BENUE DBF |
| BORNO | BORNO. DBF |
| CROSSRIVER | C/RIVER. DBF |
| DELTA | DELTA. DBF |
| EBONYI | EBONYI. DBF |
| EDO | EDO. DBF |
| EKITI | EKITI. DBF |
| ENUGU | ENUGU. DBF |

| F/NO. | DESCRIP-TION | F/NAME | F/TYPE | F/WIDTH | F/DEC. |
|---|---|---|---|---|---|
| 1 | SUR-NAME | S NAME | C | 10 | - |
| 2 | OTHER NAME | OTH-NAME | C | 10 | - |
| 3 | OCCUPA-TION | OCCUP | C | 10 | - |
| 4 | AGE | AGE | N | 2 | - |
| 5 | SEX | SEX | C | 1 | - |
| 6 | ADDRESS | ADDRESS | C | 35 | - |
| 7 | L. G. A | LGA | C | 10 | - |
| 8 | WARD | WARD | C | 10 | - |
| 9 | REG. AREA | REG-AREA | C | 1 | - |
| 10 | REG. UNIT | REGUNIT | C | 7 | - |
| 11 | VOTERS NUMBER | VNO | C | ( | - |

## 4.4 <u>FILES</u>

For this project, we have thirty-seven files. Each file for each state and the Federal capital territory. These files are stated in the Input specification.

E.g. ABIA.DBF for Abia state

ANAM.DBF for Anambra State

A/IBOM.DBF for Akwa Ibom State and so on.

The database structure for files are given below.

## 4.5 <u>Choice of environment and Software</u>

The. choice of programming language used in this study is Dbase III plus.

Features of the chosen Environment

Dbase III plus is an organized, integrated, relational package. A Dbase III plus database can be made up of many database files of which as many as ten can be activated at any one time. A database files can have up to one billion records or two billion characters.

A record can have up to 128 fields and can contain up to 40000 characters of information.

The users can used Dbase III plus in a simple way, using a menu facility called (assistant) or used Dbase (called dot commands) directly without using the menu facilities provided by assistant. Dbase III plus offers a large number of commands for users to create, retrieve, restore, add and delicate records. It also provides for sorting and searching, updating, printing and making some arithmetic calculations.

There are important features of Dbase III plus offers a programming language that enable user to construct her own database application. A large number of build in functions, string manipulation function. The programming language include command to perform conditional branching, looping, calculations, sort records, format input screen, output report and so on.

Given the features consider above, Dbase III plus and word-perfect 6.0 prewriting software packages are chosen to be appropriate for this study.

## FUNCTION OF EACH MODULAR PROGRAMS AND PROGRAMMING.

Programming is defined as the act of written programs. Computer, programs are series or sequence of instructions that be executed by a computer. Programs enable computer hardware to accomplish a given task in developing the software the modular programs were written.

## MODULAR PROGRAM

## M MENU

APP   UPDATE   DELETE   VIEW      REPORT      EXIT

ENTERING NEW RECORD

## FUNCTIONS

(1) Main Menu Program (Menu. Prg)

This program enable the computer displays the two database files on screen and also the operations that are programmed on the files. These operations include

(a) Data entering

(b) Data (amending) update

(c) Record deleting

(d) Generating of report form the data in the files and

(e) Data viewing.

The programs for any of these could be run through the main menu.

(a) Data entering program (AP.prg)

This enables the user to enter new data in to any of the two database files of his choice. The screen for the two files will be found in the appendix.


(b) Data update (Update.prg)

This program on execution enables the user to update already entered data in any of the files of the user's choice.

(c) Record deleting program (Delprg)

This program enable the users to delete any record of his choice from either of the

various database files without necessarily going through the control panel

(d) Report program (Rep.prg)

The user is able to generate report from the various files and produce the hard copy.

(e) Data viewing program (view.prg.)

This enables to user to view any of the record on the screen from any of the files.

## 4.6.1 OPERATIONAL MANUAL

The operational manual is an important part of the documentation of the software development programs. The written programs should be field-tested for a substantial period of time.

DbaseIII plus program environment is used for this project.

Step 1: Booting the system to display menu of the window, ·

Step 2: Click start: This will display the sub menu program document etc.

Step 3: Highlight program: This will display sub menu under program such as micro soft word, micro soft work, micro soft excel, explorer, MS DOS etc.

Step 4: Highlight MS DOS and click it: This will lead to C: prompt\window }

Step 5: if Dbase III or IV is under the sub-directory of MS DOS, OR at C: prompt\window} type CD: and ENTER key: This will lead you to Dbase III environment.

Press escapes ESC: This will lead you to dot. Prompt of Dbase III

Insert your program in drive A: and press ENTER key.

Type do MMENU press ENTER key: This will display the menu of the program on the screen. At this point continue to follow the instruction on the screen depending on the task you want to perform.

## 4.7 CHANGE OVER

Three methods of change over exist from old system to a new system these include:

(a) Parallel,

(b) Direct, and

(c) Pilot.

(a) Parallel Changeover.

In this case the old system are run concurrently, using the same inputs. Output from the old systems continues to be distributed until the new system has proved satisfactory. After this, the old system is discontinued and new system takes place. Some of the features of the parallel method of changing over:

It is a costly method as it involves a lot of duplication.

It is possible only where the outputs from old and new systems are easy to reconcile and where the system is similar.

The method would need the employment of extra staff or overtime working for existing staff. This can create difficulties over the period of the changeover.

Its use would give management the facility of fully testing the new system while retaining the existing system.

(b) Direct Changeover.

Here the old system is discontinued altogether and the system becomes operational immediately. Its features include.

(i) If the new system has no resemblance to the old, the a direct change-over is probably inevitable,

(ii) There must be complete confidence in the new system's reliability and accuracy before the method can be used.

(c) <u>Pilot Changeover</u>.

A pilot changeover would involve the changing-over of a part of the system either in parallel or directly.

The use of the variation of the first two methods is possible when part of the system can be treated as a separate entity.

The choice of the changeover system will depend largely on the consideration of the financial implication of the parallel system of changeover, the financial commitment of the electoral commission. Out of the three systems discussed, the direct system will be most suitable.

The problem of accuracy has been catered for with the thorough testing of the new system during the developmental period, noting that the computer system is one of the most reliable and efficient system for data and information storage and processing.

# CHAPTER FIVE

## 5.0 CONCLUSION / SUMMARY AND RECOMMEDATION

## 5.1 CONCLUSION / SUMMARY

The general objective of this project is to take care of the associated problems and shortcomings of the manual compilation and the uses of the voter's register for the purpose of election using the computer system.

The result of the feasibility study conducted shows that there are lots of benefits that will be derived from the use of computers by the electoral commission. The benefit and features include

(1)      Easy and quick means of retrieving data and information.

(2)      Fast means of communication of information within and outside the commission.

(3)      Accurate, fast and easy means of processing data,

(4)      Printed hard copies of reports are produced as cleaned and good-looking documents and memorandum.

(5)      Processing cost and filing are reduced.

(6)      For security purpose the document are protected from unwanted users.

In summary, the successful implementation of the new system will aid the commission in both processing and filling of information and thereby help the commission to meet its goals. While great part of this work can be adopted for other organization such as the National Population Commission NPC,

the Directorate of National Civil Registry among others, the focus has been on the Nations electoral body i.e. the Independent National Electoral Commission (INEC).

Lastly, it is imperative to note that the design and testing of the proposed system has been on compatible computers, it is hoped that the system will work on other brand of PCs of similar computer architecture.

## 5.2 RECOMMENDATION

Having consider the numerous advantages that are derivable from the computerization of the voters register in the conduct of a successful, free and fair election by Independent National Electoral Commission, the following suggestion and recommendation are hereby proffered:

(i)     That the organization should implement the proposed system, that is computerizing the voters register which is the cornerstone of any election from ward to National level.

(ii)    Expand its computer department in order to carry out other computer functions in addition to the present function.

(iii)    The organization should encouraged staff from other departments to under go computer training, particularly the administrative staff that will be involved in the operation of the new system. This will save cost and improve on the performance of the staff.

(iv)    Other benefit accruable to the organization from the new system includes reduction in the quantity of stationeries

that are required in the volumes of the register and cabinets. This also will save cost and office space accommodation of the registers.

(v)   The use of computers will bring about reduction of workload, staff- strength rationalized, thus maximizing scarce funds, enhance effectively and effectiveness of the organization. Quick response time in hearing of claims and objections.

(vi)  With the reduction of workload, there will be no overtime, thus cost is saved.

(vii) Finally, the unquantifible benefit to be derived from the proposed system if implemented is the security of data and information which have always put to test the issue of credibility and validity of the whole election process. Also the provision for the user to produce back-up diskette at reasonable price; in the conventional back-up system, the working system is called the "SON", the commission can produce two others that is the "FATHER" and the "GRANDFATHER". The father is usually kept within the organization and the Grandfather kept outside the organization; this eliminates the possibility of loss of information either due to fire or whatever reason.

5.3 LIMITATION

The computerization of voter's registration is the focal point of this study. Although the electoral procedure of INEC covers four stages that is :

(i)     Registration of voters and compilation of voters register.

(ii)    Accreditation

(iii)   Voting

(iv)    Collection and counting of votes and the declaration of election results.

Our focus here is the voters register on which all other stages depend. The computerization of the register will facilitate the effectiveness of all others but for time constraints and cost factor we can not extend this research to cover those appendages of the electoral procedures.

Lack of sufficient access to information considered vital and confidential by the organization have also restricted our study. But it is however necessary to mention that the other stages will also benefit from the result of this study.

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```
*MMENU.PRG
        Set echo off
        set statu off
            DO WHILE .T.
                CLEA
            @ 3,24 to 19,52  double
            @ 4,35 say "MAIN MENU"
            @ 5,35 say replicate ("=",9)
            @ 6,26 say "CODE" + space(6) + "TASK"
            @ 7,28 say "A"+ space(3) + "ENTER NEW RECORD"
            @ 9,28 say "B" + space(3) + "UPDATE RECORD"
            @ 11,28 say "V" + space(3) + "VIEW RECORD"
            @ 13,28 SAY "D" + space(3) + "DELETE RECORD"
            @ 15,28 SAY "R" + space(3) + "REPORT"
            @ 17,28 say "E" + space(3) + "QUIT"
                Ch = space(1)
        @ 21,5 say "PRESS THE TASK CODE INTEND TO CARRY OUT"
            @ 21,44 get ch pict "@!"
            read
                Do case
                    Case ch = "A"
                        do App
                    case ch = "B"
                        do update
                    case ch = "V"
                        do view
                    case ch = "D"
                        do del
                    case ch = "R"
                        do report
                    case ch = "E"
                        clea
                        cancel
                Endcase
                    close all database
            ENDDO
            RETURN
```

```
*APP.PRG
          Set echo off
          Set status off
          Set scoreboard off
          mfile = space(7)
        @ 3,5 say "ENTER FILE NAME" get mfile
          read
    If mfile = "Anambra"
    use anam
    Endif
       If mfile = "Bauchi"
       use bauchi
       Endif
         If mfile = "Benue"
         use benue
         Endif
           If mfile = "Abia"
           use abia
           Endif
             If mfile = "Bayelsa"
              use bayelsa
             Endif
               If mfile = "Niger"
                use niger
               Endif
                If mfile = "Kano"
                use kano
                Endif
                    If mfile = "Jigawa"
                    use jigawa
                    Endif
                        If mfile = "Adamawa"
                        use adamawa
                        Endif
                            If mfile = "Enugu"
                            use enugu
                            Endif
                                If mfile = "Kebbi"
                                use kebbi
                                Endif
          DO WHILE .T.
          CLEA
          @ 2,15 to 17,69 double
          @ 3,17 say "SCREEN FOR ENTERING NEW RECORD"
          @ 4, 17 say replicate("=",30)
          Append blank
          @ 5,17 say "VOTE'S REG. NO." get vno
          @ 7,17 say "SURNAME"get sname
          @ 7,37 say "OTHERNAME" get otname
          @ 7,58 say "AGE" get age
          @ 9,17 say "OCCUPATION" get occup
          @ 9,39 say "SEX" get sex
          @ 11,17 say "ADDRESS" get address
          @ 13,17 say "STATE" get state
          @ 13,35 say "LGA" get lga
          @ 15,17 say "WARD" get ward
          @ 15,35 say "REG. AREA" get regarea
          @ 17,17 say "REG. UNIT" get regunit
          read
          Ch = space(1)
```

```
@ 19,10 say "ANY OTHER DATA TO BE ENTERED? (Y/N)"
@ 19,50 get ch pict "@!"
read
    Do case
       case ch = "Y"
       loop
       case ch = "N"
       exit
    Endcase
  close all database
ENDDO
RETURN
ENDDO
    []
```

```
*  DEL.PRG
                Set echo off
                Set status off
                Set scoreboard off
            mfile = space(7)
            mvno = space(8)
            @ 3,5 say "ENTER FILE NAME" get mfile
            read
    If mfile = "Anambra"
    use anam
    Endif
     If mfile = "Bauchi"
      use bauchi
     Endif
      If mfile = "Benue"
       use benue
      Endif
       If mfile = "Abia"
       use abia
       Endif
          If mfile = "Bayelsa"
            use bayelsa
          Endif
            If mfile = "Niger"
            use niger
            Endif
                If mfile = "Kano"
                use kano
              ·  Endif
                    If mfile = "Jigawa"
                    use jigawa
                    Endif
                        If mfile = "Adamawa"
                        use adamawa
                        Endif
                            If mfile = "Enugu"
                            use enugu
                            Endif
                                If mfile = "Kebbi"
                                use kebbi
                                Endif
            DO WHILE .T.
            clea
            @ 3,5 say "Enter the Voter's no." get mvno
            read
            Locate for vno = mvno
            If found()
            clea
            @ 2,15 to 17,69 double
            @ 3,17 say "SCREEN FOR DELETING RECORD"
            @ 4, 17 say replicate("=",30)
            @ 5,17 say "VOTE'S REG. NO." get vno
            @ 7,17 say "SURNAME"get sname
            @ 7,37 say "OTHERNAME" get otname
            @ 7,58 say "AGE" get age
            @ 9,17 say "OCCUPATION" get occup
            @ 9,39 say "SEX" get sex
            @ 11,17 say "ADDRESS" get address
            @ 13,17 say "STATE" get state
            @ 13,35 say "LGA" get lga
```

```
        @ 13,49 say "WARD" get ward
        @ 15,18 say "REG. AREA" get regarea
        @ 15,38 say "REG. UNIT" get regunit
        read
        ch = space(1)
  @ 19,5 say "DO YOU WANT TO DELETE THIS RECORD? (Y/N)"
  @ 19,47 get ch pict "@!"
  read
    If ch = "Y"
    clea get
    delete
    pack
    @ 21,5 say "RECORD HAS BEEN DELETED"
    Else
    clea
    Endif
  Else
        @ 5,15 say "RECORD NOT FOUND"
  Endif
        Ch = space(1)
        @ 19,10 say "ANY OTHER RECORD TO BE DELETED? (Y/N)"
        @ 19,50 get ch pict "@!"
        read
            Do case
              case ch = "Y"
              loop
              case ch = "N"
              exit
            Endcase
          close all database
      ENDDO
      RETURN
ENDDO
```

```
* VIEW.PRG
          Set echo off
          Set status off
          Set scoreboard off
          mfile = space(7)
          mvno = space(8)
         @ 3,5 say "ENTER FILE NAME" get mfile
          read
     If mfile = "Anambra"
     use anam
     Endif
      If mfile = "Bauchi"
       use bauchi
      Endif
       If mfile = "Benue"
        use benue
       Endif
        If mfile = "Abia"
        use abia
        Endif
           If mfile = "Bayelsa"
             use bayelsa
           Endif
             If mfile = "Niger"
             use niger
             Endif
                If mfile = "Kano"
                use kano
                Endif                              (
                   If mfile = "Jigawa"
                   use jigawa
                   Endif
                      If mfile = "Adamawa"
                      use adamawa
                      Endif
                         If mfile = "Enugu"
                         use enugu
                         Endif
                            If mfile = "Kebbi"
                            use kebbi
                            Endif
          DO WHILE .T.
          clea
          @ 3,5 say "Enter the Voter's no." get mvno
          read
          Locate for vno = mvno
          If found()
          clea
          Set devi to print
          @ 3,15 to 17,72 double
          @ 4,17 say "SCREEN FOR VIEWING RECORD"
          @ 5, 17 say replicate("=",28)
          @ 7,17 say "SURNAME"
          @ 7,26 say sname
          @ 7,37 say "OTHERNAME"
          @ 7,48 say otname
          @ 7,58 say "AGE"
          @ 7,63 say age
          @ 9,17 say "OCCUPATION"
          @ 9,29 say occup
```

```
@ 9,39 say "SEX"
@ 9,44 say sex
@ 11,17 say "ADDRESS"
@ 11,26 say address
@ 13,17 say "LGA"
@ 13,22 say lga
@ 13,38 say "WARD"
@ 13,44 say ward
@ 15,17 say "REG. AREA"
@ 15,28 say regarea
@ 15,40 say "REG. UNIT"
@ 15,50 say regunit
@ 17,17 say "VOTER'S NO."
@ 17,30 say vno
Else
@ 5,15 say "RECORD NOT FOUND"
Endif
Ch = space(1)
@ 19,10 say "ANY OTHER RECORD TO BE VIEWED?(Y/N)"
@ 19,50 get ch pict "@!"
read
     Do case
        case ch = "Y"
        loop
        case ch = "N"
        exit
     Endcase
   close all database
ENDDO
   set devi to scre
RETURN
ENDDO
   {}
```

```
*UPDATE.PRG
            Set echo off
            Set status off
            Set scoreboard off
        mfile = space(7)
        mvno = space(8)
        @ 3,5 say "ENTER FILE NAME" get mfile
        read
If mfile = "Anambra"
use anam
Endif
 If mfile = "Bauchi"
  use bauchi
 Endif
  If mfile = "Benue"
   use benue
  Endif
   If mfile = "Abia"
   use abia
   Endif
       If mfile = "Bayelsa"
          use bayelsa
       Endif
         If mfile = "Niger"
         use niger
         Endif
             If mfile = "Kano"
             use kano                              (
             Endif
                  If mfile = "Jigawa"
                  use jigawa
                  Endif
                      If mfile = "Adamawa"
                      use adamawa
                      Endif
                          If mfile = "Enugu"
                          use enugu
                          Endif
                              If mfile = "Kebbi"
                              use kebbi
                              Endif
        DO WHILE .T.
        clea
        @ 3,5 say "Enter the Voter's no." get mvno
        read
        Locate for vno = mvno
        If found()
        clea
        @ 3,15 to 17,69 double
        @ 4,17 say "SCREEN FOR UPDATING RECORD"
        @ 5, 17 say replicate("=",30)
        @ 7,17 say "SURNAME"get sname
        @ 7,37 say "OTHERNAME" get otname
        @ 7,58 say "AGE" get age
        @ 9,17 say "OCCUPATION" get occup
        @ 9,39 say "SEX" get sex
        @ 11,17 say "ADDRESS" get address
        @ 13,17 say "LGA" get lga
        @ 13, 38 say "Ward" get ward
        @ 15,17 say "REG. AREA" get regarea
```

```
@ 15,38 say "REG. UNIT" get regunit
@ 15,50 say "VOTE,S NO." get vno
read
Else
@ 5,15 say "RECORD NOT FOUND"
Endif
Ch = space(1)
@ 19,10 say "ANY OTHER RECORD TO BE UPDATED? (Y/N)"
@ 19,50 get ch pict "@!"
read
     Do case
        case ch = "Y"
        loop
        case ch = "N"
        exit
     Endcase
   close all database
ENDDO
RETURN
```

Enter the Voter's no.

```
                    MAIN MENU
                    =========
            CODE        TASK
             A     ENTER NEW RECORD

             B     UPDATE RECORD

             V     VIEW RECORD

             D     DELETE RECORD

             R     REPORT

             E     QUIT
```

PRESS THE TASK CODE INTEND TO CARRY OUT

```
SCREEN FOR UDDATE RECORD
==============================

   SURNAME  MOHAMMED    OTHERNAME  SHEHU      AGE  45

   OCCUPATION  C/SERVAN  SEX  M

   ADDRESS  S.W 23 NASSARAWA ROAD, MINNA

   LGA  CHANCHAGA        WARD  NASSARAWA

   REG. AREA  C/PRY        REG. UNIT 1

   VOTER'S NO.  NCN11002
ANY OTHER RECORD TO BE VIEWED? (Y/N)
```

```
SCREEN FOR UDDATE RECORD
=============================

SURNAME    USMAN       OTHERNAME  RABI       AGE  34

OCCUPATION  H/WIFE     SEX   F

ADDRESS   T/WADA BAUCHI

LGA   BAUCHI          WARD   T/WADA

REG. AREA   LEA PRY     REG. UNIT 1

VOTER'S NO.  BBT11003
```
ANY OTHER RECORD TO BE VIEWED? (Y/N)

Enter the Voter's no.

```
            SCREEN FOR VIEWING RECORD
            ==============================

            SURNAME   SHEHU        OTHERNAME   BALA        AGE   40

            OCCUPATION   C/SERVANT SEX   M

            ADDRESS   TUDUN WADA BAUCHI

            LGA   BAUCHI             WARD   T/WADA

            REG. AREA   LEA PRY.     REG. UNIT 1

            VOTER'S NO.   BBT11001

      ANY OTHER RECORD TO BE VIEWED?  (Y/N)
```

```
SCREEN FOR VIEWING RECORD
=============================

SURNAME  SHEHU        OTHERNAME  BABA        AGE  40

OCCUPATION  C/SERVANT SEX  M

ADDRESS  N.E 123 BOSSO ROAD, MINNA

LGA  CHANCHAGA        WARD  NASSARAWA

REG. AREA  CIROMA PRY  REG. UNIT 1

VOTER'S NO.  NCN11001

ANY OTHER RECORD TO BE VIEWED? (Y/N)
```

```
SCREEN FOR VIEWING RECORD
==============================

    SURNAME  IKE          OTHERNAME  CHUKWU     AGE  45

    OCCUPATION  C/SERVANT SEX   M

    ADDRESS    23 MAKURDI ROAD, GBOKO

    LGA   GBOKO            WARD  S/GARI

    REG. AREA  S/GARI        REG. UNIT 3

    VOTER'S NO.  BGG11001

ANY OTHER RECORD TO BE VIEWED?  (Y/N)
```

```
          SCREEN FOR VIEWING RECORD
          ============================

          SURNAME  MOHAMMED    O'THERNAME  MUSA        AGE   34

          OCCUPATION   C/SERVANT SEX   M

          ADDRESS     23 EMIR'S ROAD ZURU

          LGA   ZURU              WARD   U/SARKI

          REG. AREA   EMIR PAL.    REG. UNIT 2

          VOTER'S NO.  KZU12001

    ANY OTHER RECORD TO BE VIEWED?  (Y/N)
```

```
SCREEN FOR DELETE RECORD
=============================

SURNAME  MOHAMMED    OTHERNAME  MUSA        AGE  30

OCCUPATION  C/SERVANT SEX   M

ADDRESS   S.W. 225 NASSARAWA ROAD, MINNA

LGA   CHANCHAGA        WARD   NASSARAWA

REG. AREA   C/PRY        REG. UNIT 1

VOTER'S NO.   NCN11004
```
ANY OTHER RECORD TO BE DELETED?(Y/N)

```
SCREEN FOR DELETE RECORD
=============================

SURNAME    KHALIFA    OTHERNAME  USMAN     AGE  23

OCCUPATION   C/SERVANT SEX   M

ADDRESS   T/WADA BAUCHI

LGA   BAUCHI           WARD   T/WADA

REG. AREA   LEA PRY      REG. UNIT 1

VOTER'S NO.   BBT11005
```

ANY OTHER RECORD TO BE DELETED? (Y/N)

| REG. NO. | SURNAME | OTHERNAME | SEX | AGE | LGA | WARD | REG. AREA |
|----------|---------|-----------|-----|-----|-----|------|-----------|
| CN11001 | SHEHU | BABA | M | 40 | CHANCHAGA | NASSARAWA | CIROMA P |
| CN11002 | MOHAMMED | SHEHU | M | 45 | CHANCHAGA | NASSARAWA | C/PRY |
| CN11003 | BALA | BAWA | M | 36 | CHANCHAGA | NASSARAWA | C/PRY |
| CN11004 | MOHAMMED | MUSA | M | 30 | CHANCHAGA | NASSARAWA | C/PRY |
| CN11005 | WAHABA | MOHAMMED | M | 34 | CHANCHAGA | NASSARAWA | C/PRY |
| CN11006 | DANASABE | JUMMAI | F | 34 | CHANCHAGA | NASSARAWA | C/PRY |
| CN11007 | BAWA | MOHAMMED | M | 23 | CHANCHAGA | NASSARAWA | C/PRY |
| CN11008 | MOHAMMED | FATI | F | 24 | CHANCHAGA | NASSARAWA | C/PRY |
| CN11009 | SALIHU | HAUWA | F | 23 | CHANCHAGA | NASSARAWA | C/PRY |
| CN11010 | SULEIMAN | IBRAHIM | M | 41 | CHANCHAGA | NASSARAWA | C/PRY |
| CN11011 | AMINA | IBRAHIM | F | 35 | CHANCHAGA | NASSARAWA | C/PRY |

| REG. NO. | SURNAME | OTHERNAME | SEX | AGE | LGA | WARD | REG. AREA |
|----------|---------|-----------|-----|-----|-----|------|-----------|
| GG1101 | IKE | CHUKWU | M | 45 | GBOKO | S/GARI | S/GARI |
| GG1102 | CHUKWUMA | BRIGT | M | 35 | GBOKO | S/GARIA | S/GARI |
| GG1103 | AKOJA | JOHN | M | 34 | GBOKO | S/GARI | S/GARI |
| GG1104 | OGUH | FELIX | M | 35 | GBOKO | S/GARI | S/GARI |
| GG1105 | ENTONU | MARY | F | 37 | GBOKO | S/GARI | S/GARI |
| GG1106 | UBAH | MARK | M | 45 | GBOKO | S/GARI | S/GARI |
| GG1107 | OGABA | FELIX | M | 37 | GBOKO | S/GARI | S/GARI |
| GG1108 | OHENE | JOHN | M | 40 | GBOKO | S/GARI | S/GARI |
| GG1109 | AMEH | MERCY | F | 34 | GBOKO | S/GARI | S/GARI |
| GG1110 | AMEH | GRACE | F | 35 | GBOKO | S/GARI | S/GARI |

| G. NO. | SURNAME | OTHERNAME | SEX | AGE | LGA | WARD | REG. AREA |
|--------|---------|-----------|-----|-----|-----|------|-----------|
| Г1101 | SHEHU | BALA | M | 40 | BAUCHI | T/WADA | LEA PRY. |
| Г1102 | MOH'D | MUSA | M | 56 | BAUCHI | T/WADA | LEA PRY |
| Г1103 | USMAN | RABI | F | 34 | BAUCHI | T/WADA | LEA PRY |
| Г1104 | BELLO | BABA | M | 56 | BAUCHI | T/WADA | LEA PRY |
| Г1105 | KHALIFA | USMAN | M | 23 | BAUCHI | T/WADA | LEA PRY |
| Г1106 | GAWABA | SUWEBA | F | 25 | BAUCHI | T/WADA | LEA PRY |
| Г1107 | USMAN | UMAR | M | 30 | BAUCHI | T/WADA | LEA PRY |
| Г1108 | BAWA | SULEIMAN | M | 34 | BAUCHI | T/WADA | LEA PRY |
| Г1109 | SADIQ | ABUBAKAR | M | 43 | BAUCHI | T/WADA | LEA PRY |
| Г1110 | INUWA | BELLO | M | 40 | BAUCHI | T/WADA | LEA PRY |

| G. NO. | SURNAME | OTHERNAME | SEX | AGE | LGA | WARD | REG. AREA |
|--------|---------|-----------|-----|-----|------|---------|-----------|
| U1201 | MOHAMMED | MUSA | M | 34 | ZURU | U/SARKI | EMIR PAL. |
| U1202 | KABIR | BELLO | M | 34 | ZURU | U/SARKI | EMIR PAL. |
| U1203 | TANKO | JUMMAI | F | 35 | ZURU | U/SARKI | EMIR PAL. |
| U1204 | SAMI | SANI | M | 45 | ZURU | U/SARKI | EMIR PAL |
| U1205 | AYUBA | DUDU | M | 36 | ZURU | U/SARKI | EMIR PAL |
| U1206 | ANGO | SUNDAY | M | 50 | ZURU | U/SARKI | EMIR PAL. |
| U1207 | ABUBAKAR | MUSA | M | 45 | ZURU | U/SARKI | EMIR PAL. |
| U1208 | BALA | DANKANDE | M | 46 | ZURU | U/SARKI | EMIR PAL. |