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# VOTER IDENTIFICATION AND REGISTRATION IN GHANA

## A Technical Assessment

### December 15 - December 22, 1993

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**Jeff Fischer**
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**March 23, 1994**

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## I. EXECUTIVE SUMMARY

From November 27 to December 8, 1993, the International Foundation for Electoral Systems (IFES) conducted a technical assessment of the current voter identification and registration process in Ghana. The purpose of this assessment was to assist the Government of Ghana and the international community in their efforts to improve the Ghanaian voter register in preparation for general elections in 1996. This assessment mission was made possible by funding from the United States Agency for International Development (USAID) through its mission in Accra, Ghana. The scope of the assessment included the following areas of study:

1) Concerns about the 1992 voter registry;

2) Structure of the Ghanaian electoral system;

3) Statutes governing elections, registration and voter identification;

4) Data processing capacity of the National Electoral Commission;

5) Other analyses by the Ghanaian government of national identity card options;

6) Voter education on the registration process;

7) Voter Registrar training;

8) Election timetables; and

9) Supply cost estimates for registration system options.

The IFES team met with members and staff of the Ghanaian National Electoral Commission (NEC), Statistical Services (SS), Social Security and National Insurance Trust (SSNIT), the leadership of registered political parties and representatives of the governments of the United States and Denmark. The team prepared three sets of questions for the NEC in order to obtain general information as well as to provide guidelines for the NEC to refer to in the implementation of the registration project.

The responsibility for issuance of voter identity cards and the compilation and maintenance of the voter register rests with the NEC. However, official individual identification and the issuance of national identity cards could involve a larger activity which requires the assistance of several other Ghanaian government entities. The development of such a national database could have census applications outside of the electoral process in such areas as health care, economics and agriculture.

In 1992, an interim report was developed which proposed a system for the establishment of a national identification card. Although the objectives of the report were worthy, an analysis of timetables and costs make the viability of the proposal difficult to implement.

IFES recognizes the major components involved in a national voter identification and registration system consisting of:

1) voter education on the eligibility requirements and process of registration;

2) training of voter registrars;

3) the management of voter registration source documents, cards and procedures; and

4) the production of voters lists for use at polling stations.

On the basis of the assessment team's conversations and analyses, IFES recommends the development of voter education programs which include the print, broadcast and traditional oral media. These programs must take into account the languages, literacy levels and local customs of the voting population. Equally important is the training of the voter registrars conducting the process. The reduction of registration errors and consistency in the completion of registration forms/cards are integral to the overall accuracy of the list and success of the program. IFES recommends that the source documents of the registration system include a three-part (self-duplicating) registration form/identity card designed to facilitate data entry as well as to improve the accuracy of the register.

In order to implement the project, a four to five-person support team should be assembled. The team would include an on-site project manager who would direct and coordinate the activities of the other consultants and serve as a special advisor to the NEC on the registration process. Additional consultants would be brought in to work on voter education, registrar training and data processing as required.

## II. INTRODUCTION

The International Foundation for Electoral Systems (IFES) began its involvement in the Ghanaian election process with a pre-election assessment during late April/early May 1992. The IFES team, consisting of Laurie Cooper, Program Officer for Africa; Fred Hayward, consultant and former professor of African Studies at the University of Wisconsin; and Tony Lee, Returning Officer for the Rother District Council in the United Kingdom, was in Ghana for approximately three weeks to evaluate the level of election preparation and analyze the current political environment. The mission was scheduled to permit an informal observation of the April 28 referendum on the new Ghanaian constitution. The team was therefore able to include references of actual incidents on voting day in its assessment and recommendations for procedural improvements in the five months prior to general elections. In addition to commenting on the organization of the referendum and on the political implications of the constitution up for ratification, the IFES team referred specifically to the voter register and its accuracy as a major problem of the electin process.

> More than any other single factor, the problems, frustration and delays caused at any polling station were created and exacerbated by the register...It is imperative that a re-registration of all eligible voters be undertaken immediately to provide a consistent and comprehensive register for the forthcoming presidential and legislative elections on November 3 and December 8, respectively (Ghana Election Assessment Report, IFES, May 1992).

The report of the Carter Center Ghana Election Observation Mission (beginning in early October 1992 and continuing through the presidential election) cites the voter register and voter identification as two liabilities of the November election process. Its November 1992 report states:

> The current register is dated and raises serious questions about the voting process. The absence of a reliable and consistent procedure for identifying eligible voters led to allegations of impersonation or the disqualification of these voters.

On the other hand, the Commonwealth Group report takes IFES to task for linking the credibility of the election to a new register which could not be developed in the time available, stating

> ... the further conclusion made by IFES that 'it is imperative that a re-registration of all eligible voters be undertaken immediately to provide a consistent and comprehensive register for the forthcoming presidential and legislative elections' [has] served only to heighten the controversy.

The Group nevertheless mentioned in its initial statement that the voter register would be reviewed as part of its observation exercises. While the presidential election was regarded as fair by international standards, the atmosphere of "controversy" mentioned in the Commonwealth Group's report was such that the election returns sparked violent incidents in central Ghana and provoked the chief opposition parties into withdrawing from the legislative elections.

Currently, Associates in Rural Development (ARD) is charged with the design and evaluation of the USAID Democracy and Governance strategy for assistance to Ghana. The US Government expanded the ARD strategy in September to include assistance in the area of voter registration. To implement this

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new element, ARD suggested a cooperative relationship with IFES for information of voter registration processes. In response to this suggestion from ARD, IFES proposed to USAID/Ghana a three-phase program for the design, implementation and management of a voter registration system. To implement the first phase of this program, IFES sent a staff member and a consultant to Ghana for twelve days to review the current registration system and its capabilities, and to explore options for the design and support of a new system. Jeff Fischer, IFES Chief of Staff, was the project manager for the IFES technical assistance projects in Haiti and Guyana, both of which included voter education, registration and identification components. Robyn Kall, a private consultant, was responsible for linking provincial computer workstations to a central location for Election Canada's new computerized registration and election system.

The IFES team met with the primary players involved in the voter register improvement process: the National Electoral Commission (NEC), the Ghana Statistical Services Bureau (SS), the Social Security and National Insurance Trust (SSNIT), the National Democratic Congress, the New Patriotic Party (NPP), the People's Heritage Party (PHP), the National Independence Party (NIP), the People's National Convention (PNC) and the People's Convention Party (PCP). The team also met with government representatives of the United States and Denmark, in Accra, to discuss their interest in providing assistance in the area of voter registration.

The Interim National Election Commission (INEC) organized three electoral exercises to organize in 1992. Before, during and after each exercise, the complaints about voter identification and the voter register were consistent and included the following:

1) Voter's name was not on polling station voter list;

2) Voter's name was not on polling station voter list in order or combination as anticipated;

3) Voters were impersonated;

4) Copies of the voters lists were delivered to political parties too late in the electoral process to be scrutinized;

5) Multiple registrations occurred;

6) Voters lists were not purged of deceased persons;

7) Names of persons ineligible to vote appeared on lists;

8) Underage persons voting;

9) Voting by persons not Ghanaian;

10) Bias and intimidation by the voter registrars during the registration process;

11)No accurate population base figures available for the electoral areas and settlements;

12)The process for polling station personnel to transfer voters' names from one polling station to another was difficult and inconsistently applied;

13)Confusion occurred regarding the location where a person must vote if not at the same site where voter registered; and

14)Too many voters allocated to one polling station.

These complaints were gathered from reports through interviews with members of the voting public, members of INEC, political party leaders and observers. The NPP compiled its complaints in a report entitled, The Stolen Verdict. In one chapter, "Use of Defective Register," the NPP uses examples from 17 constituencies concerning problems with the register. A later chapter, "Ineligible Voters," names 19 constituencies where voter impersonation allegedly occurred. No formal complaints were filed with the INEC concerning either voter identification or the electoral register. When questioned about this discrepancy, the IFES team received answers falling into two general areas: concern about INEC's independence from the National Democratic Council-dominated government and fear of reprisals from military or security forces.

## III. GHANA'S ELECTORAL SYSTEM

Ghana's electoral system is based on the system used in the United Kingdom. The Ghanaian Federal Parliament is composed of members elected directly by the citizens of the country at four-year intervals.

The right to vote in a national election is guaranteed by the Constitution of the Republic of Ghana. Every citizen of Ghana of eighteen years of age or above and of sound mind has the right to vote and is entitled to be registered as a voter for the purpose of public elections and referenda.

Ghana's electoral system reflects two principles:

1) the principle of representation in the House of Parliament, and;

2) periodic review of constituency boundaries; that is, how the constituency boundaries are determined and periodically readjusted to reflect population movements from one region to another.

The Ghanaian Statistical Service Bureau is presently drawing new constituency and administrative lines for the country. Ghana is currently divided into 200 constituencies and 140 local administrative districts. The new constitution states there will be 110 local administrative districts and directs all ministries to change their bureaucratic structures accordingly. Ghana is divided into as many constituencies for the purpose of the election of Parliament Members as the population justifies. Each constituency is represented by one Member of Parliament. No constituency may fall within more than one region.

The NEC is obliged by the Constitution to review the division of boundaries at intervals of not less than seven years, or within twelve months after the publication of enumeration figures following a census exercise, whichever is earlier.

The NEC, consisting of a Chairman, two deputy Chairmen and four other members is responsible for conducting and managing all aspects of national and local government elections. Act 451 of the Electoral Commission Act of 1993 designates the following responsibilities for the Electoral Commission:

1) to compile a register of voters and revise it at such periods determined by law;

2) to demarcate the electoral boundaries for both national and local government elections;

3) to conduct and supervise all public elections and referenda;

4) to educate the people on the electoral process and its purpose;

5) to undertake programs for the expansion of the registration of voters; and

6) to perform such other functions as may be prescribed by law.

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# IV. THE VOTER IDENTIFICATION AND REGISTRATION PROCESS

## The 1992 System

Problems with voter identification and the voter register were at the core of the 1992 election controversies. Some of the problems involved the level of motivation, understanding and instruction to the voter participating in the registration process. The following examples have been cited:

1) Voters changed their names or the arrangement of their names between registration day and election day. As a result, their name appeared in a different position on the voter list than anticipated. Moreover, duplicate names are a norm of Ghanaian societies. In some rural regions, members of a clan are known by the day of the week that they were born. A member would carry the tribal name and a "day" name. There is also a high incidence of common names.

2) Voters were registered at locations other than their polling site, such as their places of business, and did not know where they were supposed to vote. Addresses in the Western style are inapplicable to the majority of registered voters.

3) Henry Nii Odai of the Ghana Statistical Service Bureau reported that the population is divided 51% female to 49% male. A cursory review of a voter register indicated that less than 25% of those registered were female.

4) No non-government organizations (NGOs) were discovered by IFES which could provide nonpartisan voter education and understanding of the requirements of the voter in the registration process.

5) The instructions which were disseminated encouraged people to re-register to vote and thus created multiple registration files on the database for the same person.

Contributing to these difficulties were gaps in the training of those implementing the registration and voting program. Staff training problems are illustrated by the following examples:

1) On election day, poll workers arbitrarily divided voters lists for a single polling station among several polling stations.

2) Data entry was faulty. Names were re-arranged, titles were inserted which confused the computer sort and names were entered more than once or were left off the list altogether.

3) Registrars were paid by the number registered. Ambitious registrars reportedly registered people to vote without informing them. Consequently, these individuals may already have been registered at a different site. Opposition parties have complained that some registrars were partisan in their registration focus.

The institutional capacity of the NEC and other government agencies involved in the process was insufficient to support the implementation of the registration plan. For example:

1) There are no source identity documents for most of the population of Ghana. Questions of voter eligibility on the basis of citizenship and age cannot be resolved on the basis of

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documentation because there is no system of birth, death or marriage registration. There is no official system of street addresses to associate a voter to a particular residence.

2) There was no statutory timetable for the accomplishment of certain tasks, such as the publication of a voter registration list. The late publication of the list effectively prevented the political parties from reviewing the list prior to election day.

3) The data management capacity of INEC affected the ability to print voters lists upon request without a 30-day lead. There was a problematic merge of 1991 and 1988 data which led to the same names appearing twice on the list. The software was not designed to separately process name segments or address segments, thereby limiting the ability to check for duplicate entries. Further, the hardware configuration is not adequate in terms of memory. As a result, the sort process is a long and complex process. In addition, the voters list does not appear to have been purged of deceased persons.

4) The process of transferring names from one polling station to another has been deemed difficult.

5) There were too many voters allocated to certain polling stations.

6) There has been no reasonable budget developed and presented to the Ministry of Finance for the registration activity. The figure of 16 billion cedis has been frequently mentioned; however, this figure exceeds any known sources of funding for this project.

Such problems in the process produced the following consequences:

1) Voters' names were not easily found on the lists at polling stations causing either delays in voting or disenfranchisement.

2) Voters' names were not on lists causing these voters to visit several polling stations resulting in more extensive delays in voting or in disenfranchisement.

3) Without voter identification control, the voting system was vulnerable to voter impersonation and illegal casting of votes.

4) The inability of the political parties to scrutinize the lists and "buy into" the process further weakened perceptions about the process.

Examples of the voter registration form and 1992 pollbook are shown as Appendices I and II.

Constitutional and Legal Framework

The clauses in the 1993 Act 451, empowering the NEC to conduct voter registration and identification exercises and maintain voter records, are general and will require additional administrative procedures for implementation. The IFES team was made aware of a draft of new electoral statutes governing voter registration and identification, but these were not yet publicly available during the IFES mission. The 1993 Act cites NEC responsibilities in two separate sections: to "compile the register of voters..." and

"to undertake the preparation of identity cards." The NEC is empowered by the Act to "make regulations for the effective performance of its functions under this Act or any other law."

By contrast, the 1968 voter registration law is a fifteen-page section detailing procedures, responsibilities, forms and scheduling responsibilities. Under the 1972 law, the Commission for Local Government was responsible for identify card issuance. The question of nationality was addressed by requiring a "valid residence permit or is exempted from the need to obtain a residence permit". Fees were assessed for the cards.

NEC is charged with the administrative responsibility in managing the registration process without awkward or cumbersome statutory obligations to direct them. However, this absence of specificity is also problematic due to the lack of definition and statutory timetables.

## V.  THE DATA MANAGEMENT SYSTEM:  PROBLEMS AND LIMITATIONS

### Technical Capacity 1992 - 1993

The Ghanaian National Electoral Commission has a central computing infrastructure to provide support to the central office, 10 regional offices and 140 district offices.  Currently, all voter registration list generation and report production for both the district and national elections is performed at the central office.  There is no information technology environment outside of the central office system.

The central office computing environment is currently in transition.  It is being migrated from the old Wang 100/VS based system to a Bull/Unix platform.  The hardware and software components constituting the respective systems are detailed in Appendix III.

Presently, all data entry and some processing is still relegated to the Wang system, while report generation and printing is being handled on the Bull system.  Since the Wang environment was in place during the 1992 electoral events and its COBOL programs constitute today's processing environment the Wang system and its applications are discussed in this report.

The present computer system, although minimalist in scope and implementation, does contain the essential objects and relationships necessary to produce a voter register.  Its simplicity has enabled it to produce the register in spite of the severe hardware shortcomings.  However, due to its lack of scope it provides little in the way of ensuring integrity, providing traceability and accountability, improving efficiency and supporting the management process.

### Work Flow

The voter registration system comprises three distinct stages: data collection and control, data entry and computer processing.  All activities are centered around the production of the voter register, the dissemination of the register and the entry and subsequent reporting of election results. The system does not track election materials, human resources or election expenses.

### Limitations of the 1992 Computer System

The most significant limitations or constraints of the 1992 voter registration system were its inability to:

1) process the district register with the given disk storage;

2) print the voter register in a timely manner;

3) produce the register in a standard sort order; and

4) identify "potential" duplicate names.

### CPU and Disk Storage

The Wang VS 100 mainframe system employed during the 1992 elections was equipped with 2MB of RAM and four 288 megabyte hard drives. This seriously impacted the Commission's ability to process the data effectively and accurately. Particularly hard hit were the sort processes which, by nature, require an enormous amount of processing overhead and disk storage capacity. The logistics and mechanics of sorting became somewhat complex and subject to operator error since the larger regions could not be accommodated on one disk, and thus required several passes and the merging of data from different drives onto tape to perform a simple sort.

### Printing Capacity

The 1992 computer system configuration did not have the capacity to print the voter register in the given time frame. In 1992, the Commission owned three 600-line per minute printers giving it a theoretical printing capacity of 1800 lines per minute or approximately 30 pages per minute. However, printing capacity rarely translates to actual capacity, owing to the fact that peripherals, in particular printers, because of their mechanical parts, require routine maintenance, are subject to high failure rates, and, as a consequence, are subject to significant scheduled and unscheduled downtime. Further, it cannot be assumed that the "capacity" is dedicated to a single task such as register production; there are other important tasks of the electoral process above and beyond the production of the register that require the use of the printers. Thus, the real capacity in 1992 was, at best, 1.5 times 600-line per minute printers. The registers were delivered late to the returning officers and not at all to the political parties.

The Commission has since acquired two 1200-line per minute printers currently being used to produce the registers for the District Assembly elections (to be held early in 1994). Barring any mechanical problems, it will take approximately 1 month to print the three-ply copy of the voter register on the new printers. This is based on a five day per week, two shifts per day, one printer per shift, alternating printers between shifts, method operation and production. To print the register requires approximately 800 boxes (650 sheets/box) of paper. The cost of the final register paper, a special three-ply paper, is approximately $20 US/box. At $20 US/box, the "materials only" cost to produce a three-copy run of the voter register on regular paper is approximately $16,000 US.

### Ability to Print in a Standard Name Sort Order

The ability to print the register in a standard name sort order was, and is presently, constrained not by the application tools, nor by the hardware, but by the data in the system. The data files reflect the data requested during the registration process. That is, the data was keyed in as entered on the registration form, "name-as-recorded" order. The name field on the form does not indicate the format or the order in which the name should be recorded. This undoubtedly led to confusion. Does one record last name first? First name last? Should a title be included? Further, the IFES team did not locate any instructional or supplementary material that specified or implied an order for the segments of the name field. As a result of the ambiguous nature of the form, every permutation and combination of name segments was entered into the system. However, most entries appear to be in "first name - middle name - last name" order. It must be noted that any order sequence utilized was, and is, acceptable from a systems perspective. The name field is simply a text field in the data files with no rules of content, nor format imposed upon it.

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Once the data was entered into the system in this unstructured format, there was no way to systematically clean it up. As a consequence, the Commission had to print the register in "name-as-recorded" sort order. This in itself would not have been a problem if all names had been presented in the identical segment sequence; that is, all names presented in first-name-first order. Due to the unpredictable variation in name order, presiding officers frequently had trouble locating elector names on the register. Moreover, in the polling divisions with a high number of electors, the registers were subdivided into manageable parts (less than 500 electors where possible) and distributed to two or more polling stations. Again, this in itself was not a problem, but since the register was sorted on name-as-recorded order, the subdivisions were made on that basis. For example, letters A-J might have been allocated to poll X, letters K-T to poll Y etc. Redistribution was not a problem, unless the voter could not recall how he/she was registered. In this case, the voter would have to make the rounds to each polling station until his/her name could be located on the register. Given the passage of time from the initial registration period to polling day, it is understandable that people would not recall the precise order in which their names had been recorded.

### Ability to Identify Duplicate names

The ability to identify potential duplicate names was severely complicated by the lack of consistency in recording voter names. Realistically, only a very small percentage of duplicates could have been identified; that is, records that byte-for-byte are identical. Short of building an expert system to parse the name field, there was no practical way to suggest that perhaps the record containing the character sequence "Henry John" was referring to the same person recorded as "Mr. Henry John,", "Henry A. John" or "John Henry."

### Limitations of the Current Computer System

Unfortunately, only the disk space and printing problems of 1992 have been addressed in significant degree. A new processor with much greater on-line storage capacity has been introduced, thereby enabling a more efficient and less prone-to-error register production. Further, two high speed printers were added to the existing pool of printers which has dramatically increased the printing capacity from its former state. However, it is still a time-consuming and expensive proposition to produce several copies of the register in paper format. The problems associated with recording and presenting names, titles and addresses, persist. From a technological perspective, the same problems that plagued the 1992 elections are likely to be present in 1996 unless action is taken to:

1) regulate the data acquisition stage;

2) re-engineer system applications to move processing from the Wang VS environment or to any other acceptable operating system environment;

3) improve the efficiency of producing and distributing a copy of the voter register to the political parties; and

4) provide improved levels of tracking, auditing and reporting.

## VI. THE 1991 INTERIM REPORT ON A NATIONAL IDENTIFICATION CARD STRATEGY

During the IFES team's initial meetings, the link between voter registration and national records systems was repeatedly raised. A Ghanaian law requires possession of a national identification card at age sixteen. Under that law, cards were issued in five of the ten regions until 1976. In 1987, a parliamentary committee conducted research for a new system based on a numeric code. This system (although not sanctioned by current legislation) was implemented in 1989 and continues today. A report of the implementation entitled Interim Report of the Technical/Implementation Committee of the National Identification System, was issued in March 1991. The IFES team met with Mr. Eric N.A. Adjei, General Manager of Operations for the Social Security and National Insurance Trust and an author of the report. Mr. Adjei stated he could start production and issuance of coded national identity cards by January 1995. He has 700,000 persons in active files and records on 2,000,000 persons. The New Patriotic Party has indicated its interest in linking a new register to a national identity system, cited in Reform of the Electoral System - Ghana: Proposals of the New Patriotic Party. In a December 2 interview with National Democratic Congress (NDC) Co-Chairmen A.A. Munufie and Issifu Ali, both stated the cleansing of the register was an immediate priority; however, a national identification card should also be issued.

The Interim Report, a proposal for implementation of a national identification card system, was the product of the collaborative effort by members of SSNIT, NCD, Births/Deaths Dept., Post and Telecommunications Corporation to address the need for an accurate and efficient means of identification of Ghana's citizens. The comments that follow are important as a set of guidelines for the development of any software system development, including one specifically designed for the Ghanaian voter registration process and as a direct critique of the 1991 Interim Report's recommendations.

Momentum has been generated in the Ghanaian press and within the political party circles in promotion of the idea that a photo identity card is necessary for the next election and the voter register could be derived from a national identification card system. These assertions presuppose a nation-wide system which can be planned, designed, constructed, implemented and operational in less than two years.

The interim report does an admirable job at detailing some of the operational requirements and costs. However, the report loses depth and vision in the areas of procurement, information, technical, security and other operational requirements. The planning and designing of the procurement process deserves as much attention if not more than the amount allotted to equipment and other tangibles. In contrast, a heavily weighted technological approach will do little to correct operational, logistical or institutional deficiencies of the system. A desirable solution would be one which acknowledges and balances the roles of education, organizational structure, technology and economics.

### Operational Logistics

It is feasible for a team of trained technicians to cover the country photographing and registering Ghanaian citizens in a short time period. This procedure will serve initially to populate the database. The question of how to maintain the resulting register's credibility remains. Before creation of a system the following questions must be answered:

1) Who will collect, edit and maintain the data?

2) How will data be updated?

3) How often will the data (including photo) be updated? How frequently will data be purged? What will happen to the purged data?

4) Will citizens be required to produce some type of national ID on election day?

5) How will new applicants be registered? Will they have to travel to the District Office to be photographed and registered? Does this requirement create a systemic barrier to voter registration/entitlement?

6) By what institutional mechanism or regulation will deaths be reported?

7) Will registration of births be a requirement?

8) Is there an interagency commitment to support on-going operations?

Institutional Readiness

Many organizations could potentially benefit from a national identity card system. The design of a new system should have, at its core, a relational database so that data structures, format and relationships can be readily modified as requirements change or new functions are added.

The Risks

The risk of failure in building a system as proposed by the Interim Report is high, due to complex hardware and software integration requirements, many proposed vendors and scarcity of qualified resources with knowledge and experience in the proposed technologies. Project success depends on an unproven telecommunications infrastructure, an unquantified level of support resources/agencies and a perceived lack of inter-agency commitment. Complete operational requirements and costs have not yet been adequately addressed.

The process described in the interim report would require a longer timeframe than is afforded to the 1996 calendar. Options for the implementation of such a program in the context of a voter registration exercise are presented in the recommendation section.

## VII. RECOMMENDATIONS FOR VOTER IDENTIFICATION AND REGISTRATION

Improvements to the voter identification and registration process must be approached from four areas of activity:

1) development and implementation of a voter education program which instructs voters about their rights and responsibilities in the registration process;

2) development and implementation of a program to recruit, train and evaluate those individuals conducting the registration process;

3) development of a set of source documents and administrative procedures to be used in the registration process; and

4) development and implementation of the data processing capacity to produce voters lists for use at the polling stations.

The costs associated with each component are shown as Appendix IV.

**Voter Education**

In the 1992 re-registration process leading to the November presidential election, the INEC reports undertaking a multifaceted voter education program. Some of the basic approaches of this program should be replicated for the 1996 voter education effort.

These approaches include the use of a combination of print, broadcast and oral media. Specific education techniques in 1992, included the publication of information brochures entitled A Guide to the Voter and A Guide to Political Parties. The electronic media was tapped to include the following activities:

1) Appearances of INEC representative on "Searchlight" television interview program;

2) Question and answer sessions on the radio program, "Focus";

3) Information sessions and "video plays" on the adult education program;

4) Radio and television broadcasts of other announcements and advertising which included jingles and spot announcements.

Church groups and social organizations were also used to spread voter information messages. In rural areas, local chiefs used the "gong-gong" announcement custom to announce local re-registration activities. Messages were broadcast from loud speakers mounted on vehicles. Hearing impaired voters were also targeted in INEC's "missing link" program where "signed" messages were disseminated. In the broadcast media, messages were disseminated in six languages in addition to English, including Acan, Hausa, Ewe, Ga, Nzema and Dogbani.

When working with the media, messages were released on three levels: news, announcements and advertisements. If messages were formatted as a news release, there was no charge for the publication

or broadcast. However, announcements and advertisements were paid activities. The government has announced the formation of the National Commission on Civic Education. However, during the visit of the IFES team, the offices of the Commission had not been established and meaningful discussion with them was not yet possible. Nevertheless, a role should be defined for the Commission in voter information programs. Two other Commissions, Human Rights and Media, may have an educational role but must also have their positions defined for the upcoming election cycle.

By building upon these voter education activities, an information campaign can be developed to instruct voters on any registration activities. A consistent and distinguishing set of slogans, colors and symbols should be developed for use in the registration campaign.

This need for voter education also presents an opportunity to establish or strengthen local non-governmental organizations (NGOs). NGOs can be used as vehicles for the distribution of officially published messages and media. NGOs could be identified on the basis of regional, tribal or gender based constituencies. For example, if a close inspection of the voter list shows an under-registration of females, targeted messages to female audiences could be developed. Funding could be provided to such NGOs for locally designed voter registration and education programs.

Another component of the message outreach is the news media, electronic and print. A special press briefing should be conducted at the outset of the registration process by the Electoral Commission to describe the program and answer questions. At the same time, journalists should be encouraged to accurately represent any attributes or weaknesses of the registration process. The Electoral Commission could agree to a series of press briefings. Such a channel of communications should be designed to stall the rumor mill which, correctly or not, has weakened the public confidence in the electoral system.

The following messages and media can be employed.

### Messages

There are four categories of messages which should be communicated through the education program.

#### 1) Where/When To Register

Registration sites should be located at the same sites intended for use as polling stations. When a voter chooses to register at a particular site, he should be apprised that he will also be voting at the same location. In addition, he should be informed that the preliminary list will be posted on specific dates at this location for review of claims and objections. The registration period should be stated.

#### 2) How To Register

The registration form must be completed in a consistent and systematic method. Voters must be apprised that the names and arrangement of names which they proffer will be recorded in the identical fashion by the registrar. If the voter changes names or the arrangement of names, he must reference his voter card to recall how the name will appear on the voter list.

#### 3) Registrar Responsibilities

The registrar should instruct the voter to expect to receive a registration card and form on which his registration and voting information is contained. The voter should be instructed to expect that he will be permitted to vote only at the location where he registered.

### 4) Claims, Objections and Penalties

The voter should be apprised that deliberate multiple registration and the sale of registration cards or forms are crimes and prosecution will occur if these activities are discovered. The voter should also be informed of the claims and objection rights under the law.

### Media

These messages should be communicated on a nationwide basis through print, broadcast and oral media. Local language, literacy levels and customs should be taken into account when employing particular communication techniques.

### 1) Where/When To Register

#### A) Print

A complete list of registration sites should be developed as a public document. The lists can be divided into regional or local subsets for distribution purposes. The complete lists should be sent as a news release from the Electoral Commission to every Ghanaian news media outlet. The lists should be sent to every registered political party, NGO and be available by request from any interested individual or group.

#### B) Broadcast

The interview format for radio and television news programs can be employed to announce the registration period and where to find registration location lists. It would be impractical to announce 18,000 to 20,000 locations through a broadcast; however, the availability of the site list should be announced.

Speakers mounted on vehicles have often been used to announce short messages about registration sites in the vicinity.

### 2) Who/How/Why To Register

#### A) Print

A one-sheet, sample registration form, properly completed, should be distributed as a printed item with an accompanying instruction text. In addition, an information booklet should be developed which fully explains the registration process. This booklet should contain the portion of the electoral law which pertains to registration.

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In addition to the text-based information guides, a small tabloid solely with illustrations should be produced to show the visual instruction with no text. Only the colors, symbols and illustration of the registration process need be shown.

Posters describing the registration process can show both text-based and illustrative representations of the process.

### B) Broadcast

The radio and television outlets should be employed with a combination of no-charge news releases, interview shows and paid announcements instructing voters on the "how-to" process. A jingle and slogan should be developed.

An instructional video describing the registration process should be created. Copies of this tape can be distributed to interested groups. An audio instructional tape can also be developed for radio broadcast and other distribution.

The above cited printed material should define a set of expectations about a registrar's responsibilities, claims, objections and penalties to the voter.

### Registrar Training Program

During the 1992 re-registration program, opposition party representatives claim that the traditional neutrality of voter registrars was not preserved. In previous efforts, local teachers were used as registration officials. All groups seem to agree that the use of teachers in this capacity was a success. However, in 1992, it is reported that members of the Committee for the Defense of the Revolution (CDRs) were employed. Complaints were expressed about the heavy handed methods used by reported CDR members in encouraging people to re-register.

The new election chairman, Dr. Afari-Gyan, expressed his concern to the IFES team regarding the method of payment to registrars used in 1992. During that effort, registrars were paid by the name. Such an incentive system of payment contributed to the bloating of the voters list.

A role for the political parties in the recruitment of registrars has been absent. Since there must be confidence in the system for it to work, some structured role for the political parties should be developed.

The establishment of a registration consultative council composed of a representative of each political party would provide a mechanism for all parties to "buy into" the registration process. The principal role of the council would be to provide names of qualified and nonpartisan individuals who could serve as registrars. However, the NEC has the final say on the employment of registrars. NEC district and regional officials could also consult with church groups or other non-partisan NGOs for names of prospective registrars.

Depending upon the option chosen for the registration approach, the registration process could involve up to 60,000 individuals. This figure represents employing 3 registrars per site.

The training of such a body of individuals can be accomplished through a "cascade" approach. Two trainers from each of Ghana's 110 districts can attend workshops held at the regional levels. These 220 people can return to their districts with skills and materials to train the registrars to be employed in their district. A feedback sheet or test of the significant points of the process should be given at the end of the workshop to assure that the trainers have a basic understanding of the process. A review of the tests should be performed by NEC personnel. If a trainer does not exhibit a complete understanding of the process, additional instruction should be provided. All trainer appointments should be considered provisional until satisfactory knowledge is displayed. If a potential trainer is simply unable to grasp the curriculum, replacement trainers should be employed.

The trainers should be deployed back to their regions and set up training programs on the district levels. By using the district unit as a basis, district officials can monitor the process. Polling agents can be invited to attend any of the training sessions whether in Accra or in the field.

If equipment is to be employed in the process, an additional set of training exercises must be devised for the use of this equipment. Potential equipment includes camera, laminators, die cutters and generators. If film is introduced into the process, clear policies on when to provide photo retakes and instructions on the handling and storage of film must be provided in order to minimize spoilage.

The training materials to be developed include a complementary package of a manual and training video. An audio tape of the video can be made. The curricula should include the following topics:

1) How to complete a typical registration;

2) Potential problems which could be encountered at registration sites;

3) Illustrations showing ideal configurations for registration sites; and

4) Penalties for malfeasance by either prospective voters, polling agents or registrars themselves.

A copy of the electoral law pertaining to registration should be included in the training materials.

Sample kits of training materials can be deployed with the trainers. Each trainee in the field would receive a copy of the manual, statutes and audio tape. Where the viewing technology exists, copies of the training video can also be widely deployed.

Voter Identification and Registration Procedures

The IFES team has identified several options for the registration of voters and the issuance of voter identity cards. These options involve collecting either a thumbprint record, photographic record or some combination of the two.

Each option involves the development of a registration booklet which consists of a three-part form bound in denominations sufficient to register 25 voters. One sheet of the booklet is a card stock bearing a unique and non-reproducible watermark. The card is on a perforated sheet which is torn off and given to the registrant. A signed registration receipt is also generated. The second and third sheets are

different colors and are perforated at the binding. Of these two copies, one sheet is to be given to the district electoral commission office and the remaining sheet and booklet are returned to the central offices for review and data entry. The oath of the registrar appears as the first page of the booklet and it must be signed by those registrars using the booklet.

Information collected to be noted on the card and registration form includes name, locality of residence, registration/polling site, a pre-printed sequence number, gender, birth date, age, region code, district code, town/area council code, electoral area, zone code and unit code. Both the voter and registrar sign the form.

In order for this method to be successful, the registration site must be the same site used as the polling station. The Electoral Commission can track the distribution of cards by polling station. These sites should also be used for the posting of voter lists for claims and objections. According to one Electoral Commission report, no voter is supposed to have to walk further than 3 miles to a registration/polling site.

Under the scenario using a thumbprint record only, there would be 20,000 registration sites where a simultaneous and nationwide registration process would be conducted in each of these locations over a two-week period. Under this process, the acts of voter registration and the issuance of an identity card are simultaneous. This activity will produce a backlog of up to 8,500,000 registration documents which must be transported and stored in Accra. Upon receipt at the Electoral Commission, these booklets must undergo an edit check and be organized by batch for data entry. A permanent hard copy retention center should be established for these documents.

The second option introduces a photograph onto the identity card in addition to a thumbprint. Since the equipment required to produce photographs would be too expensive to place in all 20,000 registration sites, a schedule of visits to each site would need to be made. Under one scenario, there would be 200 technical teams who would circulate around the country. The same registrars would be employed to work the same sites as the first option. The difference is the arrival of the technical team to take photographs and produce the cards. Cost estimates are shown for the thumbprint option, 200 teams combining thumbprint and photograph and 400 teams producing that combination based upon the assumption of 8.5 million voters and 20,000 polling stations is an average of 425 voters per poll. If it took an average of five minutes per voter to register, photograph and print, it would take one registration team an average of three and one half ten-hour days to complete the exercise for each station. With a half-day travel time factored in, it would take 200 teams approximately 400 person days to complete the entire registration task. Increasing the number of teams to 400 would reduce that time to 200 person days at a maximum.

The voter identity card is presented at the polling station for voting purposes. Cards can be punched with a distinctive paper punch to signal that the bearer has voted. By using electoral stain on the voter's thumb, both the voter and the identity card will bear a mark that voting has been performed.

The Electoral Commission must adopt administrative procedures to address volume, workflow and control requirements for the voter registration exercise. These procedures include:

1) Selection of registration sites which must also be suitable as polling stations;

2) Establishment of timetables for mandatory revisions, registration closing, list availability, claims and objections and final list publication;

3) Development of forms to be used in the registration process;

4) Development of the legal notices to be used in the process;

5) Establishment of standards for the maximum number of voters assigned to a polling station;

6) Definition of the penalties for malfeasance by voters, registrars or staff; and

7) Definition of eligibility to become a voter registrar and how the relationship can be terminated.

A network of fax machines linking each local administrative office with the NEC should also be considered. Although such a network has general administrative applications, it can be useful in the registration process. Applications of the network would include the editing of forms, the clarification of claims and objections cases and the processing of transfers and other special voting requests. Estimates for the purchase of a fax network as well as other registration accessories such as transfer cases and paper punches are shown in the section entitled Cost Estimates.

Data Processing

Source Data

The remaining registration form copy in the registration booklet is the source document used for data entry. The information contained on the form for entry includes the voter identification number, voter's names, locality of residence, address, gender, birth date, age, region code, district code, town/area code, electoral area code, zone code, unit code and polling station. Taking into account future uses of this data, other ministries could be consulted about the value of particular information for their agency.

The name category can include the following segments:

1) Last name or surname;

2) First name, Christian name or day name;

3) Other names - middle names, maiden names.

The value of recording the tribal name as an additional name field as distinct from the proposed name segments above can be assessed. A special title field could be added. A special title would be defined to include any special form of address such as Nana, Justice, Honorable or Lord.

The address field in its present unstructured form serves little purpose except as a loose manual check of voter eligibility. The data cannot be validated or verified by software although registrars could be instructed to use a set of key words to describe address designations. However, in its present format, it is of little value to the Electoral Commission or other agencies after the electoral event. The address

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field should be reviewed in the context of what form would provide maximum reusability. At a minimum, IFES recommends that the resident address field be captured by the following:

1) Locality of permanent residence; and

2) Address designation within locality (street name, area).

There should be several edit checks on the voter register. These consist of:

1) Search and report matches on Last Name + First Name + Locality;

2) Check and report omissions of: Last Name, First Name, Locality of Residence, Birth Date, Age, Locality of Birth, Gender, Polling Station;

3) Validation of Region Code, District Code, Electoral Area Code, Zone Code, Unit Code, Polling Code, Gender, Locality of Residence, Locality of Birth against control tables;

4) Verification of Age equaling Registration Date minus Date of Birth

The final register format can be presented in the following sort orders:

1) Last name, First name; or

2) Voter identification number order.

Additionally, registers would be sorted on a national, regional, electoral district or polling station basis.

### Computer System

There are currently 40 terminals installed at the Electoral Commission. On the basis of the "high side" figure of 8,500,000 voters and the assumption that a data entry clerk would enter 20 documents per hour, there would be 500,000 person hours required to complete the job or 12,500 hours per terminal. If three shifts of operation were organized, it would take 520 terminal days to enter the data. On the basis of these projections, it would take 100 terminals to bring the data entry time down to 145 days.

The data entry time constraints of the "thumbprint only" option imply that although additional administrative and demographic data may be collected on the registration form, there will only be sufficient time to enter that data which is pertinent to the production of poll books. Minimally, this would mean the name, address, gender, polling station and voter identification number. Date of birth could be considered. The additional data collected can be entered under a longer timeframe. The introduction of a photograph automatically creates a longer time requirement for card production which provides the data entry process with additional time as well.

If the existing system is used, 20 workstations would need to be added to the configuration. In addition, the following assumptions would be made:

1) Use of the existing Bull mini-computer hardware;

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2) Use of the existing suite of software (COBOL, RPG II, BASIC, C);

3) Modification of the existing software to include segmented names, segmented addresses, titles, locality;

4) Modification of the existing software to include verification and validation checks on duplicate names, age, gender, locality;

5) Creation of new registration forms, reports, register formats, booklet management forms, processes/screens and audit reports;

6) Production of the register in Last Name, First Name format and by voter identification number sort order;

7) Availability of the voter register to political parties in paper, CD-ROM or diskette.

However, adding 20 dumb terminals to a limited computer product does not build the computer capacity in the same way that a network of personal computers does. By using a combination of the existing Bull System and 20 PCs, a less expensive installation can be engineered. In addition, the PCs provide more flexibility at the conclusion of the registration exercise to rotate their use to other government agencies both in Accra and outside of the capital. Moreover, such a computer capacity could mean that NEC performs data entry services for other agencies.

With either option, a CD ROM cutter can be employed to package the final lists for public review. The Electoral Commission could also consider establishing a CD ROM "reading room" with a PC and the data capability for review. Such an installation could permit requests for segmented lists to be printed. Otherwise, the final registration list can be provided on diskettes. In the event the public requests the lists in printed form, two additional 1,200 line per minute printers could be procured to double the list printing capacity.

## Software Considerations

Software can be developed using the objectives of a national identification card by employing a prototype approach. In establishing a prototype, there are the following activities:

1) Select an appropriate prototype tool based on the graphical user interface;

2) Build a working prototype of the initial phase of a national identification card system which could function minimally as a voter register;

3) Determine the data requirements of the system using exploratory prototyping methods;

4) Provide an efficient means of managing human resources; and

5) Provide, within materials management, capability to improve the efficiency and accuracy of tracking and auditing election materials.

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All electoral materials should be inventoried prior to distribution. An automated tracking process to assist in allocation, distribution and storage should be developed for registration forms and booklets as well as ballot papers and booklets.

A computerized audit trail should be used for any transaction made against the register, such as transferred, special or proxy voters; claims and objections; omission, audits, additions or deletions; or other modifications not initiated through particular forms. The trail should provide information regarding the date and type of the transaction, name of person initiating the transaction, person affected by the transaction and the person who authorized the transaction.

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## VIII. CONCLUSION

Judging from the interviews conducted in Accra, the development of a credible voter identification and registration process is the most significant concern in the administration of presidential and legislative elections for 1996. If the NEC fails to develop the appropriate programs, the legitimacy of the election will be severely diminished.

There is sufficient time to produce such a register; however, NEC does not possess the institutional resources for the complete undertaking. On the basis of this report, IFES is prepared to draft a proposal to implement the recommendations here stated.

In order to implement such a program, a four-to five-person consulting team would need to be developed. The project would be field supervised by an on-site project manager who would be in Ghana from one year to one and a half years ahead of the November 1996 elections. This field manager would have an election or public administration background and would serve as a resource to the Electoral Commission. The field manager would directly work in the voter registration exercise. The field manager would also direct and coordinate the activities of the other specialties. The education and training components of the program could be managed by one or two persons depending upon the scale of operations undertaken. Both positions should be activated approximately eight months before the election with an implementation plan completed and ready to go. A lead computer specialist would direct the installation of any new equipment or the development of new software.

The process of implementation begins by establishing the administrative procedures and timetables to accomplish the tasks. Next, a determination is made on the data to be collected and converted to screens using the data and distribution requirements as guides for the design and installation of a computer system. After this step, programming and testing of the computer system occurs before the implementation phase begins.

The IFES implementation strategy for such a project would include the following considerations:

1) The approach should send a signal to public officials and voters that the technical and procedural standards for accuracy, testing and data are now more stringent than during previous registration exercises.

2) Voter information messages should incorporate language and gender issues.

3) Long-term and alternative applications for the document/data processing network which is designed should be discussed. This should contribute to the establishment of a set of source identity documents for Ghanian citizens as a long-term project.

4) The project will take advantage of local consultative and technical support for management and implementation of the program when appropriate.

5) A political consensus on the registration process by the opposition parties and the government is essential to establishing public confidence in the process. The project should provide opportunities for formal or informal involvement by all political parties.

6) Nongovernmental organizations should be developed and supported in civic education efforts, adding encouragement to the government's voter information messages.

Pursuit of the voter identification and registration project by USAID/Accra would address several long term and peripherally related issues.

1) The process of data collection, storage and usage would provide a model for infrastructural development among other government agencies such as the Social Security and National Insurance Trust and Statistical Services.

2) The polemics of the register would be reduced or eliminated, opening the political debate to more substantial discussions on economic and social issues.

3) NGOs would gain experience and develop societal roles in the civic education and training fields.

B No. J475487

# FORM OF APPLICATION FOR VOTERS REGISTRATION

FOR OFFICIAL USE

...............................................Region

...............................................District

...............................................Town/Area Council

...............................................Electoral Area

...............................................Zone

...............................................Unit

...............................................Polling Station

1. Name..................................................................................................

2. Date of Birth

| Day | Month | Year |
|-----|-------|------|
|     |       |      |

3. Age........................    4. Sex:    (a) Male ☐    (b) Female ☐
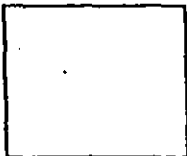
5. Residence/House Number.......................................................................

6. Street or Area.....................................................................................

7. Town/Village........................................................................................

8. District................................................................................................

9. I certify that I am a citizen of Ghana and not disqualified from being registered as a voter.

......................................Signature and Mark ☐ of applicant

......................................Witness    Date...................................19......

(Registration Officer/Assistant)

--------------------------------------------------------------------

## RECEIPT

*(To be signed, detached and returned to the applicant.)*

B No. J475487

Application Form in respect of...............................................................

in...............................................Unit of...............................................Zone

of.....................................................Town/Area Council received by me

on...............................................19......

......................................................................

(Registration Officer/Assistant)

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# NATIONAL ELECTORAL COMMISSION

10 - 92

REGISTER OF VOTERS FOR    DADE-KOTOPON CONSTITUENCY

ACCRA DISTRICT

GA 01 06 05 05 05 08 03 03 ( 5 )
REGISTER CODE

ZONE 01   UNIT 03 POLLING STATION  LABONE SECONDARY SCHOOL ACCRA

| SERIAL No. | NAME OF VOTER | ADDRESS | REGIST. NO. |
|---|---|---|---|
| 1. | IBRAHIM A COSSEY | LABONE DRIVE F 253 LABADI | 0177832 (M) |
| 2. | IBRAHIM BUKARI | E8 NORTH FLABONE LA | 0872792 (M) |
| 3. | IBRAHIM YAKUBU | LABONE SEC SCH S/QRSLABONE SEC SCH LABADI | 0177833 (M) |
| 4. | INNOCENT OKUMAI JNR | E15.LABONE EST EAST LABONE LA | 0872793 (M) |
| 5. | INNOCENTIA ACOLATSE | 110/70   NORTH LABONE LABONE | 0872794 (F) |
| 6. | IRENE AMMAH | LABONE SEC SCH S/QRSLABONE SEC SCH LABADI | 0177834 (F) |
| 7. | ISAAC ADDY SACKEY | LABONE SEC SCH S/QRSLABONE SEC SCH LABADI | 0177835 (M) |
| 8. | ISAAC ADU | LABONE SEC SCH S/QRSLABONE SEC SCH LABADI | 0177836 (M) |
| 9. | ISAAC BINEY | F122 NORTH LABONE LA | 0872795 (M) |
| 10. | ISAAC DJATEI QUAYE | LABONE SEC SCHOOL.   LABONE SEC SCH LABADI | 0177837 (M) |
| 11. | ISAAC ESHUN | 14 ABAFUH CRESCENT NORTH LABONE LABADI | 0177838 (M) |
| 12. | ISAAC FOSUMENE | G 28/7 KWAA BODAI BU LABADI | 0872796 (M) |
| 13. | ISAAC K OBENG | LABONE SEC SCH S/QRSLABONE SEC SCH LABADI | 0177839 (M) |
| 14. | ISHAMAEL OKWABI | LABONE SEC SCHOOL.   LABONE SEC SCH LABADI | 0177840 (M) |
| 15. | ISHMAEL ABBEY | LABONE SEC. SCH. S/QRSLABONE SEC SCH LABADI | 0177841 (M) |
| 16. | ISHAEL TURKSON | LABONE ESTATE F 207/4 LABADI | 0177842 (M) |
| 17. | IVY AKUETTEH | LABONE SEC SCH S/QRSLABONE SEC SCH LABADI | 0177843 ( ) |
| 18. | IVY AMANKWA | LABONE SEC STAFF QTRS LABADI. | 0177844 (F) |
| 19. | IVY AMEKUDZI | F282/7 LABONE SEC SCH LA | 0872797 (F) |
| 20. | J A MARFO | 13.FIFTH LINK RD NORTH LABONE LABADI | 0872798 (F) |
| 21. | J E QUARSHIE | B 13 NORTH LABONE LABADI | 0872799 (M) |
| 22. | J E TEBOAH | LABONE ESTATE FL C 2LABONE SEC SCH LABADI | 0177845 (M) |
| 23. | J H AIDOOH | LABONE SEC SCH S/QRSLABONE SEC SCH LABADI | 0177846 (M) |
| 24. | J K A QUAYNOR | LABONE DR. NO F 254 LABONE SEC SCH LABADI | 0177847 (M) |

APPENDIX III

| Electoral Commission Computer Environment Profile<br>Hardware Capacity | | |
|---|---|---|
| Hardware Element | As of Dec 1992 | As of Dec 1993 |
| **Processing Capacity**<br>Host/Server<br>RAM<br>Operating Systems | Wang VS 100<br>2 MB<br>Wang proprietary VS | Bull DPX 2<br>128 MB<br>Unix System 5 Release 3.2 |
| **Storage Capacity**<br>Disk Storage<br><br>Tape Storage<br><br>Other | 4 removable disk drives - 288<br>MB each<br>3 mag tape drives | 2.05 GB internal hard drive<br><br>250 MB 8mm streamer tape drive<br>2 GB data tape cartridge |
| **Printing Capacity**<br>High Speed Line Printers<br>Laser Printers<br>Dot Matrix Printers<br>   Standard<br>   Letter Quality<br>Plotters<br>Other | 3 - 600 line/minute<br>—<br><br>—<br>—<br>—<br>— | 2 - 1200 line/minute<br>2 - Canon 8-III<br><br>20 Bull/Compuprint<br>18 Epson LQ 2550 |
| **Workstations/Terminals**<br>Terminals<br>IBM PC Compatibles<br>   386 SXs<br><br><br>   486 DXs<br><br>Other | 32 Dumb terminals<br><br>—<br><br><br>— | 40 Dumb terminals<br><br>20 386-25MHZ with 2-4MB RAM<br>   and 40MB hard disk drive<br><br>20 486 DX 33MHZ with 4-8 MB<br>RAM 40-120MB hard disk drive |
| **Power Supply**<br>UPS<br>Generator | unknown<br>unknown | 1 UPS with a 2 hour capacity<br>gas powered ? |
| **Communications**<br>Network Interface Cards | -- | 20 8-bit Etherlink II |

| | Electoral Commission Computer Environment Profile Software Configuration | |
|---|---|---|
| Software Element | As of Dec 1992 | As of Dec 1993 |
| **Software Platform**<br>Operating System<br>Relational Database<br>4 GL/Code Generator | VS<br>Flat files<br>-- | Unix System 5<br>Flat Files<br>-- |
| **Application Development Tools**<br>Planning Tools<br>Design Tools<br>System Administration Tools<br>Application Development Tools | --<br>--<br>VS Utilities<br>COBOL<br>RPG II<br>BASIC | --<br>--<br>Unix System 5 Utilities<br>COBOL<br>RPG II<br>Microfocus COBOL<br>C |
| **Communications Software**<br>Unix Terminal Emulators<br>Wang-PC File Transfer SW | | PCINIT (5 licenses)<br>PC/VS Data Exchange |
| Main Applications | Code Table Maintenance<br>Registration Data Entry<br>Validation of Registration<br>Duplication Check<br>Election Results Data Entry<br>Final Register<br>Proof Listing<br>Job List<br>Code Book List | Code Table Maintenance<br>Registration Data Entry<br>Validation of Registration<br>Duplication Check<br>Election Results Data Entry<br>Final Register<br>Proof Listing<br>Job List<br>Code Book List |
| **Communications Software**<br>Unix Terminal Emulators<br>Wang-PC File Transfer SW | | PCINIT (5 licenses)<br>PC/VS Data Exchange |
| Network Management Tools | -- | -- |

32 Terminals

Mag Tape Drive

3
600 LPM
Line Printer

Wang VS 7000
2MB RAM

288 MB Disk Drive

Operating System: Wang VS/OS
Application Development Tools:
  COBOL
  RPG II (Report Writer)
  BASIC

Main Applications:
  Data Entry - Electoral Areas, Registration, Results
  Data Verification and Validation
  Duplication Checker
  Final Register
  Covers
  Results
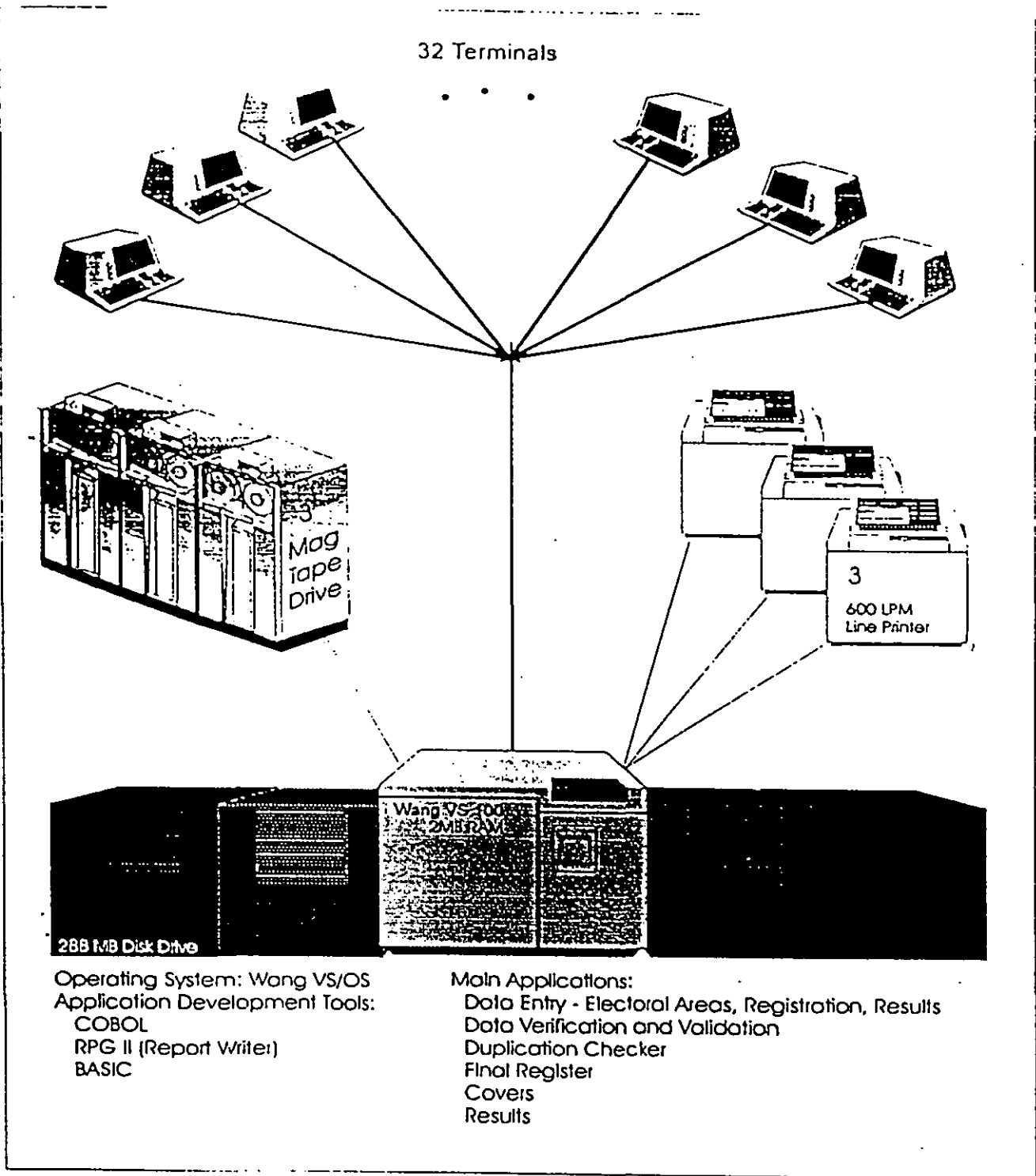
APPENDIX IV

## VOTER EDUCATION PROGRAM MATERIALS
## Supply Cost Estimates

| Description | Quantity | Cost |
|---|---|---|
| List of registration sites | 1,000 | $20,000.00 |
| Sample registration form | 100,000 | 10,000.00 |
| Information booklet | 100,000 | 205,000.00 |
| Illustrated tabloid | 100,000 | 105,000.00 |
| Posters (2) | 200,00 | 105,000.00 |
| Instructional video and television PSA | 500 | 25,000.00 |
| Audio messages and jingle development | 1,000 | 25,000.00 |
| Shipping and handling | | 74,250.00 |
| TOTAL | | $569,250.00 |

## REGISTRAR TRAINING PROGRAM MATERIALS
## Supply Cost Estimates

| Description | Quantity | Cost |
|---|---|---|
| Training manual | 75,000 | $175,000.00 |
| Video tape | 100 | 75,000.00 |
| Audio instruction tapes | 20,000 | 50,000.00 |
| Shipping and handling | | 45,000.00 |
| SUBTOTAL | | $345,000.00 |

## VOTER REGISTRATION/IDENTITY CARD
## THUMBPRINT OPTION
### Supply Cost Estimates (1)

| Description | Cost |
| --- | --- |
| Registration booklets/cards for 8,500,000 voters | $722,500.00 |
| Cold lamination process for 8,500,000 cards @ | 140,000.00 |
| 20,000 thumbprint pads to yield 25,500,000 prints @ $7.00 each | 140,000.00 |
| Shipping and handling | 150,375.00 |
| TOTAL | $1,152,875.00 |

(1) Additional expenses associated with the registration exercise include transportation, registration site rental, temporary staff required to process documents and data, document processing, and warehousing space.

## VOTER REGISTRATION/IDENTITY CARD
## THUMBPRINT/PHOTOGRAPH OPTION
### Supply Cost Estimates
### 200 Camera Teams

| Description | Cost |
|---|---|
| Registration booklets/cards for 8,500,000 voters | $722,500.00 |
| Hot lamination pouches for 8,500,000 cards @ $28.50/M | 242,250.00 |
| 20,000 thumbprint pads to yield 25,500,000 prints @ $7.00 each | 140,000.00 |
| 40,000 glue sticks @ $.50 each | 20,000.00 |
| 200 battery-operated pouch laminators @ $110.00 each | 22,000.00 |
| 200 batteries and chargers @ $400.00 each | 80,000.00 |
| 200 photograph die cutters @ $125.00 each | 25,000.00 |
| 200 tripods @ $75.00 each | 15,000.00 |
| Camera **OPTION I** /200 Polaroid Spectra II single-shot cameras @ $85.00 each | 17,000.00 |
| Camera *OPTION II* /200 M-400 four-shot cameras @ $560.00 each | *112,000,000* |
| Film **OPTION I** /29,000 cases of Spectra intregal film, 600 sheets/case (600 single photos/17,000,000) @ $630.00/case | 18,270,000.00 |
| Film *OPTION II* /9,000 cases of Polaroid T667X color film, 500 sheets/case (4 photos/sheet & 2,000photos/case) @ $450.00/case | *4,050,000.00* |
| Shipping and handling | I. 2,933,062.00 <br> *II.  814,312.00* |
| TOTAL Camera/Film **OPTION I** | $22,486,812.00 |
| TOTAL Camera/Film *OPTION II* | *$6,243,062.00* |

## VOTER REGISTRATION/IDENTITY CARD
## THUMBPRINT/PHOTOGRAPH OPTION
### Supply Cost Estimates
### 400 Camera Teams

| Description | Cost |
|---|---|
| Registration booklets/cards for 8,500,000 voters | $722,500.00 |
| Hot lamination pouches for 8,500,000 cards @ $28.50/M | 242,250.00 |
| 20,000 thumbprint pads to yield 25,500,000 prints @ $7.00 each | 140,000.00 |
| 40,000 glue sticks @ $.50 each | 20,000.00 |
| 400 battery-operated pouch laminators @ $110.00 each | 44,000.00 |
| 400 batteries and chargers @ $400.00 each | 160,000.00 |
| 400 photograph die cutters @ $125.00 each | 50,000.00 |
| 400 tripods @ $75.00 each | 30,000.00 |
| Camera OPTION I /400 Polaroid Spectra single-shot cameras @ $85.00 each | 34,000.00 |
| Camera *OPTION II* /400 M-400 four-shot cameras @ $560.00 each | *224,000.00* |
| Film OPTION I /29,000 cases of Spectra intregal film, 600 sheets/case (600 single photos/17,000,000) @ $630.00/case | 18,270,000.00 |
| Film *OPTION II* /9,000 cases of Polaroid T667X color film, 500 sheets/case (4 photos/sheet & 2,000 photos/case) @ $450.00/case | *4,050,000.00* |
| Shipping and handling | I. 2,956,912.00<br>*II. 814,312.00* |
| TOTAL Camera/Film OPTION I | $22,486,812.00 |
| TOTAL Camera/film *OPTION II* | *$6,535,162.00* |

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## DATA PROCESSING
### Supply Cost Estimates
### Bull System Option I

| Description | Quantity | Unit Cost | Cost |
|---|---|---|---|
| Dumb terminals | 20 | $1,000.00 | $20,000.00 |
| High-end workstations- 486-66MHZ-DX2 w/ 2-500 MB disk drives | 2 | 5,000.00 | 10,000.00 |
| Software development | 1 | | 500,000.00 |
| Printers/1,500 lines per minute | 2 | 15,000.00 | 30,000.00 |
| CD ROM cutter | 2 | 10,000.00 | 20,000.00 |
| Other componentry | | | 110,000.00 |
| Shipping and handling | | | 154,100.00 |
| TOTAL | | | $844,100.00 |

## DATA PROCESSING
## Supply Cost Estimates
## PC Network/Bull Option II

| Description | Quantity | Unit Cost | Cost |
|---|---|---|---|
| PCs- 486DX33, 16MB RAM, 120MB HDD, 1.44MB FDD, network adapter, VGA mono monitor | 20 | $1,900.00 | $38,000.00 |
| High-end PCs- 486DX 266, 128MB RAM, 2GB HDD, CD ROM, 1.44MB FDD, network adapter | 2 | 7,500.00 | 15,000.00 |
| Network software- 100- user Novell 3.12 | 3 | 4,000.00 | 12,000.00 |
| Database software | 1 | 1,000.00 | 1,000.00 |
| Software development- specification, design, coding, testing, documentation, initial training | | | 300,000.00 |
| Printers/ 1,500 lines per minute | 2 | 15,000.00 | 30,000.00 |
| CD ROM cutter | 2 | 10,000.00 | 20,000.00 |
| Other componentry | | | 50,000.00 |
| Shipping and handling | | | 105,340.00 |
| TOTAL | | | $571,340.00 |

## PROJECT IMPLEMENTATION TEAM
### Staffing Cost Estimates (3)

| DESCRIPTION | DAYS | COST |
|---|---|---|
| Salaries | | |
| Project Manager | 468 | $155,376.00 |
| Voter Education Specialist | 156 | 51,792.00 |
| Training Specialist | 156 | 51,792.00 |
| Computer Specialist | 312 | 103,584.00 |
| Computer Technician | 156 | 51,792.00 |
| TOTAL | | $414,336.00 |
| Lodging/Per Diem | | |
| Project Manager | 468 | 74,880.00 |
| Voter Education Specialist | 90 | 14,400.00 |
| Training Specialist | 90 | 14,400.00 |
| Computer Specialist | 312 | 49,920.00 |
| Computer Technician | 156 | 24,960.00 |
| TOTAL | | $178,560.00 |
| Travel | | |
| Project Manager | | $9,000.00 |
| Voter Education Specialist | | 6,000.00 |
| Training Specialist | | 6,000.00 |
| Computer Specialist | | 6,000.00 |
| Computer Technician | | 6,000.00 |
| TOTAL | | $33,000.00 |

| Other Direct Costs | | |
|---|---|---|
| Local transportation | 468 | 9,360.00 |
| Communications | NA | 36,000.00 |
| Office supplies/equipment | NA | 50,000.00 |
| TOTAL | | $95,360.00 |
| TOTAL STAFFING COST ESTIMATES | | $721,256.00 |

## OTHER IMPLEMENTATION COSTS

| Description | Quantity | Unit Cost | Cost |
|---|---|---|---|
| Set aside monies for NGO grants | NA | NA | $100,000.00 |
| Registrar training program - other | NA | NA | 590,000.00 |
| Computer systems training program | NA | NA | 60,000.00 |
| Photographic equipment training | NA | NA | 25,000.00 |
| Facsimile machines | 115 | 500.00 | 57,500.00 |
| Fax paper | 115 | 19.35 | 2,225.25 |
| Hand-held paper punches | 40,000 | 0.89 | 35,000.00 |
| Registration document transfer cases | 20,000 | 1.00 | 20,000.00 |
| Transfer case adhesive | 80,000 | 0.50 | 40,000.00 |
| Registration document storage cases | 2,500 | 2.19 | 5,475.00 |
| Transparent ballot boxes | 20,000 | 44.96 | 899,200.00 |
| Shipping and handling | | | 158,910.00 |
| TOTAL | | | $1,377,220.25 |

## VOTER IDENTIFICATION/REGISTRATION PROGRAM
### Cost Estimate Summary (4)

| Description | Cost |
|---|---|
| Voter education program materials | $569,250.00 |
| Registrar training program materials | 345,000.00 |
| Voter registration forms/cards<br>　　Thumbprint option I<br>　　Photograph option II (400 camera teams) | <br>1,520,875.00<br>6,535,162.00 |
| Data processing<br>　　Bull option I<br>　　PC/Bull option II | <br>844,100.00<br>571,340.00 |
| Project implementation team | 721,256.00 |
| Other implementation costs | 1,377,220.25 |
| TOTALS<br>　　I,I<br>　　I,II<br>　　II,I<br>　　II,II | <br>$5,009,701.25<br>$4,736,941.25<br>$10,391,980.25<br>$10,119,228.25 |

(4)　Average cost range per voter depending upon option (on the basis of 8,500,000 voters):
$.56 - $1.22

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## MONTHLY REGISTRATION ACTIVITY SCHEDULE
## THUMBPRINT OPTION

| Month | Year | Activity |
|---|---|---|
| November | 1996 | Election Month |
| May | 1996 | Final Voter Registrations Lists Available to Public<br><br>Voter Education Program on Registration is Completed |
| April | 1996 | Final Voter Registration Lists are Completed |
| March | 1996 | Claims and Objections to Voter Registration Lists |
| February | 1996 | Preliminary Voter Registration Lists Completed |
| October | 1995 | Voter Registration Period (two weeks)<br><br>Voter Data Entry is Started |
| September | 1995 | Registrar Training Program is Conducted |
| August | 1995 | Voter Education Program on Education is Started<br><br>Delivery of Registration Supplies in Ghana |
| June | 1995 | Printing of Registration Booklets is Completed<br><br>Design of Voter Education Program is Completed<br><br>Design of Registrar Training Program is Completed |
| March | 1995 | Software/Hardware Design Reconfigurations are Completed<br><br>Printing of Registration Booklets is Started<br><br>Design of Voter Education Program is Started<br><br>Design of Registrar Training Program is Started |
| September | 1994 | Software/Hardware Design Reconfigurations are Started<br><br>Procurement Process is Started |

## MONTHLY REGISTRATION ACTIVITY SCHEDULE
### PHOTOGRAPH/THUMBPRINT OPTION
200 Teams

| Month | Year | Activity |
|---|---|---|
| November | 1996 | Election Month |
| May | 1996 | Final Voter Registration Lists Available to Public<br><br>Voter Education Program on Registration is Completed |
| April | 1996 | Final Voter Registration Lists are Completed |
| March | 1996 | Claims and Objections to Voter Registration Lists |
| February | 1996 | Preliminary Voter Registration Lists Completed |
| October | 1995 | Voter Registration Period Ends |
| September | 1994 | Voter Registration Period Begins |
| August | 1994 | Registrar Training Program is Conducted |
| July | 1994 | Voter Education Program on Registration is Started<br><br>Delivery of Registration Supplies in Ghana |
| May | 1994 | Printing of Registration Booklets is Completed<br><br>Design of Voter Education Program is Completed<br><br>Design of Registrar Training Program is Completed |
| February | 1994 | Software/Hardware Design Reconfigurations are Completed<br><br>Printing of Registration Booklets is Started<br><br>Design of Voter Education Program is Started<br><br>Design of Registrar Training Program is Started |
| August | 1993 | Software/Hardware Design Reconfigurations are Started<br><br>Procurement Process is Started |

# MONTHLY REGISTRATION ACTIVITY SCHEDULE
## PHOTOGRAPH/THUMBPRINT OPTION
### 400 Teams

| Month | Year | Activity |
|---|---|---|
| November | 1996 | Election Month |
| May | 1996 | Final Voter Registration Lists Available to Public<br><br>Voter Education Program on Registration is Completed |
| April | 1996 | Final Voter Registration Lists are Completed |
| March | 1996 | Claims and Objections to Voter Registration Lists |
| February | 1996 | Preliminary Voter Registration Lists Completed |
| October | 1995 | Registration Period Ends |
| May | 1995 | Registration Period Begins |
| April | 1995 | Registrar Training Program is Conducted |
| February | 1995 | Voter Education Program on Registration is Started<br><br>Delivery of Registration Supplies in Ghana |
| January | 1995 | Printing of Registration Booklets is Completed<br><br>Design of Voter Education Program is Completed<br><br>Design of Registrar Training Program is Completed |
| October | 1994 | Software/Hardware Design Reconfigurations are Completed<br><br>Printing of Registration Booklets is Started<br><br>Design of Voter Education Program is Started<br><br>Design of Registrar Training Program is Started |

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## ACRONYMS

| Acronym | Description |
| --- | --- |
| ARD | Associates for Rural Development |
| EC | Electoral Commission |
| GOG | Government of Ghana |
| NDC | National Democratic Congress |
| NIP | National Independence Party |
| NPP | New Patriotic Party |
| DANIDA | Danish Assistance Agency |
| PCP | People's Convention Party |
| PHP | People's Heritage Party |
| PNC | People's National Convention |
| PNDC | Provisional National Defense Council |
| SS | Ghana Statistical Services |
| SSNIT | Social Security and National Insurance Trust |
| USAID | United States Agency for International Development |

APPENDIX VII

PERSONS INTERVIEWED

| Name | Organization | Title |
|------|--------------|-------|
| Mr. Nana Oti Boateng | GOG-SS | Government Statistician |
| Ms. Jette Bukh | DANIDA | Counsellor |
| Ms. Grethe Dittmer | DANIDA | Counsellor |
| Mr. Amissah Arthur | GOG-Finance | Deputy Minister of Finance |
| Mr. David Adeenze-Kangah | GOG-EC | Deputy Chairman (Operations) |
| Dr. K. Afari-Gyan | GOG-EC | Chairman of the Electoral Commission |
| Mr. Dixon-Kwame Afreh | GOG-EC | Deputy Chairman (Finance and Administration) |
| Mr. Hubert Akumiah | GOG-EC | Data Processing Manager |
| Mr. Amadu Sulley | GOG-EC | S.E.O. |
| Mr. Samuel Tettey | GOG-EC | Director (Operations) |
| Mr. Eric Adjei | GOG-SSNIT | General Manager (Operations) |
| Mr. Rowland-Atta Kesson | NCP | Representative |
| Other political parties | NPP PCP PNC PHP NIP | Representative |
| Mr. Issifu Ali | NDC | National Co-Chairman |
| Mr. A.A. Munufie | NDC | National Co-Chairman |
| Mr. Kenneth Brown | US | Ambassador |
| Mr. James Ladsma | US | Deputy Ambassador |
| Mr. David Appleton | USAID | Political Officer |

| | | |
|---|---|---|
| Mr. Stafford Baker | USAID | Chief, Program Office |
| Mr. Joseph Goodwin | USAID | Mission Director |
| Mr. Jan Kraust | ARD | Political Scientist/Consultant |
| Mr. Shaheene Mozaffar | ARD | Political Scientist/Consultant |
| Mr. Richard Sandbrook | ARD | "Political Parties" Author |
| Ms. Tina West | ARD | Political Scientist/Consultant |
| Mr. Bob Wuertz | USAID | Program Officer |

APPENDIX VIII

# BIBLIOGRAPHY

1. Act 451 The Four Hundred and Fifty-First Act of the Parliament of the Republic of Ghana, entitled "The Electoral Commissions Act, 1993". Date of assent: 6th July, 1993.

2. Interim Report of the Technical/Implementation Committee of the National Identification System, the National Identification Committee, March 1991.

3. Political Parties - Democratic Governance Draft Report, November 29, 1993

4. Democratic Consolidation in Ghana: A Strategy - D/G Draft Report, November 29, 1993.

5. Donor Activity in Democratic Governance in Ghana - D/G Draft Report, November 29 1993.

6. Consolidation of Democratic Governance in Ghana: A Strategy - Draft Outline.

7. Political Parties and Democracy in Ghana's Fourth Republic - Proceedings of a Seminar Organized by the Department of Political Science , University of Ghana, Legon on 2nd and 3rd July, 1992. Edited by Kwame A. Ninsin and F.K. Drah, Woeli Publishing services, Accra 1993.

8. Presidential Election in Ghana 3 November 1992, The Report on the Commonwealth Observer Group, Commonwealth Secretariat, November 6, 1992.

9. Ghana: A Pre-Election Assessment Report, International Foundation for Electoral Systems, June 1, 1992.

10. A Guide to the Voter, Interim National Electoral Commission, 1992.

11. A Guide to the Candidate, Interim National Electoral Commission, 1992.

12. A Guide to the Political Parties, Interim National Electoral Commission, 1992.

13. Instructions to Registration Officers - Revision of Voters Register 1971, issued by the Electoral Commission, printed by Ghana Publishing Corporation (Printing Division).

14. Instructions to Registration Assistants May 1971, issued by the Electoral Commission, printed by Ghana Publishing Corporation (Printing Division).

15. 1984 Population Census of Ghana - The Gazatteer 1 (AA-KU), Alphabetical List of Localities with Statistics on Population, Number of Houses and Main Source of Water Supply, produced by Statistical Service Accra, Ghana.

16. 1984 Population Census of Ghana - The Gazatteer 2 (KW-ZU), Alphabetical List of Localities with Statistics on Population, Number of Houses and Main Source of Water Supply, produced by Statistical Service Accra, Ghana.

17. 1984 Population Census of Ghana - Demographic and Economic Characteristics - Total Country, produced by Statistical Service Accra, Ghana.

18. <u>1984 Population Census of Ghana - Special Report on Localities by Local Authorities - Eastern Region</u>, produced by Statistical Service Accra, Ghana.

19. <u>1984 Population Census of Ghana - Special Report on Localities by Local Authorities - Greater Accra Region</u>, produced by Statistical Service Accra, Ghana.

20. <u>1984 Population Census of Ghana - Special Report on Localities by Local Authorities - Central Region</u>, produced by Statistical Service Accra, Ghana.

21. <u>1982 GA Local Council (200) S.A.2 Map</u>, produced by Statistical Service Accra, Ghana.

22. <u>1981 OSU: St. Maron Catholic Church E.A. Code 21050425 Map</u>, produced by Statistical Service Accra, Ghana.

23. <u>L.I. 587, Registration of Voters Regulations</u>, 1968, Date of Gazette notifications: 12th July 1968. Ghana Publishing Corporation (Printing Division).

24. <u>L.I. 1397, District Assembly Elections (Registration of Voters) Regulations 1988</u>, Date of Gazette notifications: 30th December 1988. Ghana Publishing Corporation (Printing Division).

25. <u>L.I. 1537, Public Elections (Parliament) Regulations 1992</u>, Date of Gazette notifications: 7th August 1992. Ghana Publishing Corporation (Printing Division).

26. <u>P.N.D.C.I. 271 Interim National Electoral Commission Law 1991</u>, Date of Gazette Notification: 6th December, 1991. Ghana Publishing Corporation (Printing Division).

27. <u>P.N.D.C.I. 281 Political Parties Law 1992</u>, Ghana Publishing Corporation (Printing Division).

28. <u>P.N.D.C.I. 285 Presidential Election Laws 1992</u>, Date of Gazette Notification: 76th August, 1992. Ghana Publishing Corporation (Printing Division).

29. Booklet <u>Constitution of the National Democratic Congress (NDC)</u> {no dates or publisher details}

30. Booklet <u>National Democratic Congress Manifesto</u>, {no dates or publisher details}

31. Report <u>U.S. Economic Development Assistance - Ghana Program Highlights</u>, United States Agency for International Development Mission to Ghana, August 1993.

32. Sample <u>Report - Number of Registered Voters in Electoral Areas and Polling Stations</u>, Run Date: 05/11/93, National Electoral Commission.

33. Printout of data entry screen <u>VS Date Entry Utility File: TTT Library: Voters</u>, printed on November 30, 1993, National Electoral Commission.

34. Sample <u>Form of Application for Voters Registration</u> used for the 1992 Elections, Interim National Electoral Commission.

35. Sample <u>Register of Voters</u>, printed in 1993 in preparation for the 1994 District Assembly Elections, National Electoral Commission.

36. Sample Form F [Regulation 21 (2)] Part 1 - Form of Voting by Proxy EL.6, used for the 1992 Elections, Interim National Electoral Commission.

37. Sample Form F [Regulation 21 (2)] Part II - Cancellation of Appointment of a Proxy EL.7, used for the 1992 Elections, Interim National Electoral Commission.

38. Sample Transferred Voters List Form EL.13, used for the 1992 Elections, Interim National Electoral Commission.

39. Sample Special Voters List Form EL.22, used for the 1992 Elections, Interim National Electoral Commission.

40. Sample Absent Voters List Form EL.23, used for the 1992 Elections, Interim National Electoral Commission.

41. Sample Notice of Objection to Insertion of Name in Register of Voters, Form Reg. 4, used for the 1992 Elections, Interim National Electoral Commission.

42. Sample Notice of Claim for Insertion of Name or Correction of Particulars in Voters' Register, Form Reg. D, used for the 1992 Elections, Interim National Electoral Commission.

43. Poster How to Mark a Ballot Paper, Presidential and Parliamentary Elections 1992, issued by INEC with Financial Assistance from DANIDA.

44. Sample computer report Presidential Election - Ghana 2.11.92 National Results ( % Turnout, % Votes Cast, % Distribution by Candidate by Region), National Electoral Commission.

45. Sample computer report Presidential Election - Ghana 2.11.92 Polling Statistics on Constituency Level (Votes Cast, % Invalid Votes, % Valid Votes, Registered Voters, % Turnout, by Region), National Electoral Commission.

46. Sample computer report Parliamentary Election - Ghana 29.12.92 Results on Constituency Level (Candidate, Votes Received, Elected, Rejected Votes, Total Votes Cast), National Electoral Commission.

47. Sample computer report 1992 Voters' Register Database Summary by Region (No. of Records, Total Bytes, Density, Storage in MB), National Electoral Commission.

48. Sample Social Security Contributor Registration Form, Republic of Ghana Social Security Law 1991 (P.N.D.C L 247).

49. Local Government Law 1988 (P.N.D.C L 207).

50. Local Government Bill 1993, proposals to revise Local Government Law, 1988 (P.N.D.C L 207).

51. Act 452 - The National Commission For Civic Education Act 1993, Ghana Publishing Corporation (Printing Division).

52. Constitution of the Republic of Ghana 1992, printed by the Tema Press of Ghana Publishing Corporation.

53. <u>Voters Identity Cards in Ghana - Perspectives on Introduction and Utilization Draft Report</u> by A. Koldby, Danish International Development Agency, February 20, 1993.

54. Memorandum on National Electoral Areas from INEC Operations to Member/Secretary -- 1992 (no date).

55. Memorandum National Electoral Areas from K. Damoah-Agyemang, Secretary INEC, sent to all Regional Officers, 6th April 1992.

56. Demarcation of District Boundaries, no printing or issue date, paper received from the Electoral Commission on December 7, 1993.

57. <u>Demarcation of Local Government Boundaries, Guidelines for Field Staff</u>, no printing or issue date, paper received from the Electoral Commission on December 7, 1993.