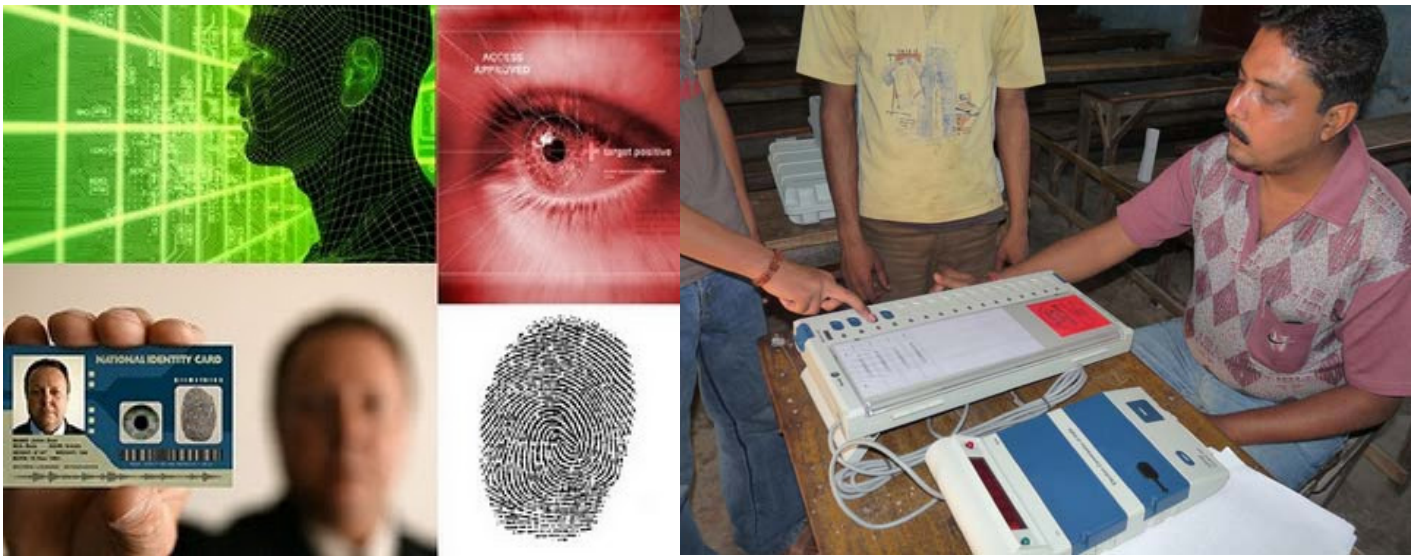


NATIONAL CONFERENCE ON BIOMETRIC VOTER REGISTRATION & E-VOTING IN GHANA



Mon. 8th February – Tuesday 9th February 2009
Alisa Hotel, North Ridge, Accra

CONFERENCE REPORT

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Conference Report

The annual Danquah Institute Governance and Development Dialogue Series was held at the Alisa Hotel, North Ridge, Accra, Ghana, from the 8-9 February 2010. This year's series was themed: 'National Conference on Biometric Voter Registration and Electronic Voting'. Invitations were extended to all political parties. Participants included the General Secretary and Youth Organiser of the Convention People's Party, the National Chairman and General Secretary of the People's National Convention and the National Chairman and Director of Research of the New Patriotic Party. The event, unfortunately, coincided with the maiden National Executive Committee meeting of the newly elected national executives of the National Democratic Congress. Some of the civil society organizations which took part included the CDD, IDEG, ADP, CODEO, CSD, IMANI and the umbrella Civil Society Forum. The media had representations from both print and electronic. Major media partners for the programme included Joy FM (the biggest English-speaking radio station in Ghana), Daily Guide (the biggest independent newspaper in Ghana), TV3, Metro TV and Net2 TV. The Electoral Commission was represented by its Head of IT and Technical Operations while the National Identification Authority was represented by its Executive Secretary. Various international and local ICT experts, in biometrics and election automation technology, also participated.

The conference focused on interrogating and assessing efforts to introduce a biometric voter register and the viability of electronic voting in Ghana.

The conference provided a forum to discuss how Ghana could protect the integrity of elections from the point of voter registration to the moment of winner certification, factors that influence public confidence in elections and to make recommendations for the future.

A communiqué issued at the end of the conference was signed by participants, including members of the legislature, political parties, civil society organisations, local IT experts and media houses. The fact that the conference dominated media discussions during and after the conference attests to how seriously Ghanaians take the issue of electronic voting as an option for enhancing the credibility of the country's voting system.

We are particularly grateful to our conference chair, Prof. Ken Agyeman Attafuah, for chairing both days of the conference, and encouraging wide ranging debate on a number of issues.

We are also grateful to members of Parliament, speakers and the various representatives who supported the conference by facilitating the discussion forums.

A number of recommendations were made which we hope the Electoral Commission would implement so as to safe guard the integrity of our elections. The political parties that attended the conference promise to take the matter up at the Inter-Party Advisory Committee (IPAC) level. IPAC is a joint forum of all the recognised political parties in the country and the Electoral Commission, where discussions are held and agreements reach on

how to protect and enhance the integrity of our voting system and on other matters of common interest to all political parties.

The conference was organised by the Danquah Institute and with sponsorship provided by the World Bank, the Friedrich Nauman Foundation, legislatures and other individual donors.

We would like to thank the members of parliament for making time of their busy schedule to attend both days of the conference; the Centre for Democratic Development, Institute for Democratic Governance as well as other civil society organisations for providing advice on the agenda, and in supporting the conference. We are grateful to Joy FM, Metro TV, TV3, Net2 TV, Skyy TV, Citi FM, Oman FM, The Daily Graphic, The Daily Dispatch, The Daily Guide, The Ghanaian Lens, The Ghanaian Observer, The Crusading Guide for their generous partnership for this event. We are also grateful to all the other media houses across the country which gave extensive coverage to the event and matters arising from it.

Prof. Addo Fenning

Chairman, Governing Board

Danquah Institute

Keynote Speech – Haruna Iddrissu, MP, Minister for Communications

In his opening address, the Communications Minister lauded the initiative by the Danquah Institute to convene a conference of experts and stakeholders from civil society, political parties, the media, etc, to examine the issue of biometric registration and electronic voting.

The minister acknowledged the superiority of the application of technology over the present ballot paper system to the enhancement of the credibility and integrity in the conduct of elections in Ghana. He called for the introduction of election automation technology in the shortest practicable time.

He focused on the challenges such as unreliable electricity supply and poor rural electrification, high illiteracy levels and the low appreciation of computer usage among Ghanaians.

He nevertheless maintained government's commitment to ensuring that a biometric voter register is ready and available for use in the 2012 elections.

“All political parties have endorsed biometric registration, which is prelude to e-voting and what we are doing here today will help to shape our electoral process in the future. However, we do not have the requisite infrastructure for a speedy implementation of the all important projects in the short term”.

He suggested to all political parties to channel their effort towards the e-voting project by 2016, saying “the EC does not have the capacity to supervise the project now. I still think we can get a cut-off point by 2016 by which time we would have been well prepared”.

He identified other challenges such as the review of existing electoral laws to accommodate the project, and building the capacity of the EC for efficient supervision of the project.

DAY ONE – BIOMETRIC VOTER REGISTRATION

NIA registration and implications for the creation of a credible voter register– Dr. William Ahadzie, Executive Secretary - National Identification Authority.

Dr. William Ahadzie, Executive Secretary of the National Identification Authority, gave the first presentation of the day. He spoke on the ongoing National Identification registration and its implications for the Voter's register.

He began by giving a brief history of the National Identification System and how it has been transformed into the National Identification Authority. The National Identification System was first introduced in 1972 as NRC Decree 129 (The Citizen's card). The PNDC/NDC government made technical proposals in 1991 and a report provided some input for this new system. The new implementation strategy was started by the NPP government in 2003 and by the National Identification Authority Act 2006 (Act 707), the National Identification Authority came into being.

The core function of the NIA is to create and maintain a national database, provide and promote the use of national identity cards to promote the economic, political and social activities in the country.

Four regions, namely the Volta, Central, Eastern and Western Regions and have been completed, with the Greater Accra Region currently ongoing. According to Dr. Ahadzie, the Upper West Region will be the last region to undergo the National Identification System and this, he hoped, should be completed in August 2010.

According to Dr. Ahadzie, an identity is created using the Automated Fingerprint Identification System (AFIS). During enrolment, the fingerprint of the person is scanned using a digital device and its features extracted to create a template which is stored in the AFIS database and used to create one's identity. Each fingerprint extract is matched against that of millions of other enrolled applicants to eliminate any duplicate.

Each individual's identity is reduced subsequently to fingerprint representations in the database to which all personal record including PIN are associated.

The key features of the National Identification System are as follows:

- The system is designed with multiple levels of security to prevent unauthorised access. Management reports will be generated to enable the NIA monitor and control access of its operations.
- Data will be maintained through the use of unique identifiers which ensure images and date are linked/matched throughout the system, ensuring data and or images relating to one individual cannot be accidentally linked to another person
- The system is built with an open architecture design to allow other public and private sector systems to be integrated or linked to it with ease.

- The system is designed to be able to generate various population related data to support the activities of the various organisations that would need it.

The “Ghanacard” will be the official document for identification of Ghanaians and other nationals in the country. The ID card contains basic personal information about the holder (name, date of birth, photograph, PIN). It also contains other details such as fingerprints and bio-data and signature of the holder which are stored in a 2-dimensional barcode on the back of the card

Public institutions such as the security agencies, financial institutions, health institutions, metro and district assemblies, birth, death and marriage registry, the electoral commission, CEPS and revenue agencies among others could rely on the National database created by the NIA for information and thereby cutting out the multiplicity of cards issued by some of these bodies.

Elaborating further on the features of the system, Dr. Ahadzie stated strongly that the data collected by the NIA could be used by the Electoral Commission in the compilation of the voter register. He said data of persons aged 18 years and above could be extracted and provided to the EC which will thus serve as a new and credible register. This register, he said, would be devoid of multiple entries and thus eliminate any possibility of a person having his name in more than one polling station.

He also stated that the NIA could print as well as personalise the voter’s ID card using the register generated for the Electoral Commission

Declaring A President From A Bloated Voter Register. An Analysis Of Election Results From 1992-2008 – Ben Ephson, Managing Editor of the Daily Dispatch

Mr. Ben Ephson, a pollster and the managing editor of the Daily Dispatch, said the trend of rejected or invalid votes since the inception of democracy in this country was a big problem and if not tackled could lead to violence in the near future.

He was of the view that the topic he was addressing fell squarely within the domain of democracy and public education, and signalled a failure in the work of the National Commission of Civic Education, and the Electoral Commission because the staggering number of spoilt ballots over the years was an embarrassment to Ghana's democracy.

It reflected short-sightedness in planning and a lack of sensitivity to the crucial significance of illiteracy in the electoral process: the need to fine tune voting practices to reduce the incidence of disenfranchisement and also a mark of the failure of planners to be sensitive to history.

The pattern of rejected ballots since the return to constitutional rule in 1992 had been remarkable. In 1992 out of a total vote of four million one hundred and twenty-seven thousand, eight hundred and seventy-six (4,127,876) ballots cast in the presidential elections, one hundred and forty-nine thousand eight hundred and thirteen (149,813) votes representing 3.6% were rejected. That huge percentage was simply because the time interval between 1992 and the previous national election in 1979 was 13 years.

The percentage of rejected ballots dropped four years later. In 1996 out of seven million two hundred and fifty-six thousand eight hundred and eighty-two (7,256,882) votes cast, eleven thousand one hundred and eight (11,108) were rejected representing 0.15%. That low number was simply because we must have done our homework after 1992.

In the year 2000, out of six million six hundred and twenty thousand two hundred and thirty-two (6,620,232) votes cast, one hundred and nineteen thousand three hundred and sixty-two (119,362) were rejected, representing 1.8%. We inched up but did not reach the 1992 record high.

In 2004, we forgot our lessons again, he said. Out of the total of eight million eight hundred and thirteen thousand, nine hundred and eight (8,813,908) votes cast, one hundred and eighty-eight thousand one hundred and twenty-three (188,123) votes were rejected, representing 2.1% of votes cast.

In 2008, about 2.5% of ballots cast were rejected in the first round--- the second highest in Ghana's recent history. The number of rejected ballots dropped slightly to 92,388 for the second round of elections and this represented 1.02% of the total votes cast.

Coming to the staggering figures once again, the disaggregation of the data from region to region, only tells part of the story that illiteracy, or probably inadequate education about how to vote was a factor.

In other words, the higher the illiteracy rate, the greater the percentage of rejected ballots. In 2004, rejected ballots in the Greater Accra region were 1.2%; 1.4% for Ashanti region; 1.7% for Volta region, 2.0% for Eastern region, 2.2% for Brong Ahafo region, 2.3% for the Central Region; Western Region got 2.8%, Upper East had 3.7%, Northern Region had 3.9%, and Upper West Region had 5.6% of ballots rejected.

In 1992 Central Region recorded 4.7% of rejected ballots (as against 2.3% in 2004); Upper East had 6.5% (against 3.7% in 2004), Northern Region had 6.7% (as against 3.9% in 2004), and Upper west region which had as much as 8.3% in 1992 got 5.6% ballots rejected in 2004.

Incidentally the last three regions with the highest rates of rejected ballots: Upper East, Northern and Upper West also have the highest illiteracy rates in the country. According to the 2000 census figures, Northern region has an illiteracy rate of 76.2%, Upper East has 76.5%, and Upper West has 73.5% illiteracy rate. Indeed of all regions, Greater Accra which often has the lowest percentage of rejected ballots, also has the lowest illiteracy rate of 18.4%. Western region has 41.8%, Central has 42.9%, and Brong Ahafo has 48.5% .

There is thus a clear correlation between illiteracy and the incidence of rejected ballots. From the preceding analysis, it is clear that we are unwittingly disenfranchising several thousands of eligible voters and possibly communities by neglecting crucial factors that promote stakeholder participation in governance.

But, Mr Ephson also made the case that 'spoilt ballots' are also a means to rig elections. He said some EC officers allegedly put a dye in their hair and use it to spoil ballots for certain candidates.

He concluded by saying that if our planners had done their home work, the district called Tain, would probably have had no business deciding who won the Presidential elections.

Relationship Between The NIA Registration, Ghana Statistical Service Census and EC Voter Register – Kofi Bentil, Imani Ghana.

Mr. Kofi Bentil, a lecturer at Ashesi University, focussed on rationalising and optimising national registration and ID systems.

Currently, any Ghanaian above 18 years needed at least one of the following: Biometric passport, Voter's ID card, Driver's license, National Health Insurance Card and the National Identification.

The issuance of more than one card has been caused by what he described as the "multi silo system" of collecting information. The multi silo system included multi collection, multi processing and multi ID systems.

The lack of adequate co-ordination between these institutions has resulted in them going through an expensive, time-consuming repetitive process of collecting virtually the same information. A vivid example of this multi silo system is what will ensue before 2012. The NIA is undertaking biometric registration of every citizen or permanent resident of Ghana of 6 years and above; a national census is to be held and the EC will also embark on a biometric voter registration exercise and all these involved the collection of at least some of the information that the census will capture.

The National Health Insurance Authority has spent time and money "collecting data instead of using that data."

The multiplicity of information collection has resulted from the lack of political leadership and direction and the lack of a clear national strategy.

All these organisations are related and thus they need the same information. It would be only realistic if they worked together in data acquisition and management. He resolved that if this was not done, the process of data collection would cost more, achieve less and in turn the effectiveness of these institutions would be diminished. It would only mean suspending a rationalisation that would eventually be done.

What is needed is to have a system which composed of one collection system, one processing system, one representation and verification system and finally one updating system.

Mr. Bentil proposed the setting up of a National Data Centre, connected to the Births and Death Registry for update purposes, which will process data and make it user ready for various state agencies such as the Electoral Commission, National Health Insurance Authority, Social Security and National Insurance Trust (SSNIT), the Ghana Police Service, among others.

Making reference to the Constitution of the Republic, Mr. Bentil said the Ghana Statistical Service was in the position to collect all information needed by these institutions and can subsequently share it.

This, he said, will lead to a system which issues every citizen with “one machine-readable, multipurpose NATIONAL BIOMETRIC ID CARD.”

Biometric Technology: The Key to a Credible Voter Register – Sagem Securite

The delegation from Sagem Securite was led by Fabien Rouaud, Program Director for Ivory Coast; Yves Lequenne, Program Director for Ghana; Jeff Legros, Western Africa Sales Manager; and Oumar Diarra, Regional partner (Albatros Technologies).

Mr. Fabien Rouaud said Sagem Securite was a part of the SAFRAN Group whose line of business is in aerospace, defense and security applications. Sagem Securite was present in 30 countries and has equipped over 450 government agencies worldwide and currently has workforce of 5,100 employees. He said Sagem Securite is currently number one in biometric technology, Automated Fingerprint Identification Systems (AFIS), and Fingerprint equipment and has a market share of 60% in the world's AFIS market.

Mr. Rouaud said the introduction of biometric technologies into Ghana's electoral system is a tremendous opportunity for the Electoral Commission of Ghana to fight fraud on the voter register and also during polling day.

The introduction of biometric technologies for the creation of a voter register would enable the detection of duplicates through the AFIS system. This would imply that one person would only be entitled to one voter card and thus one card owner would only have one vote.

The end result of this is the delivery of a credible voter register thereby securing a trusted and peaceful ballot. With the biometric voter register, there are no multiple registrations and thus no impersonation.

An example of where the introduction of biometric technology into the electoral system had been done is in la Cote d'Ivoire. *(Since the Sagem presentation the President dissolved the electoral commission of la Cote d'Ivoire on allegations of allowing multiple registration in opposition strongholds).* Sagem Securite is the Technical Operator. Mr. Rouaud said the use of biometric technologies has been chosen as a core means of achieving the key objectives of identifying the population and the organisation of free, fair and transparent elections.

The registration process in Cote D'Ivoire is a two tier system where the identification of the populace is done together with the compilation of the electoral register. If the individual to be registered is over 18, he or she has a choice of being included in the voters register or simply just being registered without he or she being included in the voters roll. This process, according to Mr. Rouaud is efficient in terms of saving time and resources.

He said 6,300 mobile stations in about 11,000 enrolment sites in Cote D'Ivoire were all connected through a VSAT network and this has resulted in a population register of 6.61 million people and a provisional register, which has been certified by the UN, of 6.38 million people.

He concluded by saying that this system is 99.9% full proof and has the ability to deliver a credible voter register should Ghana consider employing biometric technology in the compilation of a new voter register.

Expert Panel Discussions

After the presentations by the various speakers were over, the Chairman convened 3 separate panel discussions composed of experts on legal, collaboration between institutions and costing and funding issues.

1. LEGAL ISSUES

The creation of the Electoral Commission, powers, functions and legal backing:

1992 Constitution – The Electoral Law

- Article 42 – Right to vote
- Article 43 – The Electoral Commission
- Article 45 – Functions of the Electoral Commission
- Article 46 – Independence of the Electoral Commission
- Article 49 – Voting at Elections
- Article 51 – Regulations for Elections and Referendum
 - CI 12 – Registration of Voters’ Regulations 1995
 - Act 451 – Election Commission Act. 1993
 - Act 473 – District Assembly Elections Act, 1994

Challenges facing the EC

- Non-collaboration with other agencies by the Electoral Commission
- Duplication of data collection by agencies
- Additional costs to the nation
- Monopoly by the Electoral Commission in data collection which is unreliable, sometimes fraudulent, bloated and open to abuse etc.

Recommendations

- Amendment of relevant laws to ensure collaboration
- Collaboration of relevant agencies to reduce cost and ensure more credible register and voting
- Production of data for various purposes with minimum confusion and easy access.

2. **COLLABORATION BETWEEN INSTITUTIONS (EC, NHIS, DVLA ETC)**

- One Central Database with the essential biometric basics to identify individuals
- There should not be a duplication of central database
- Every institution should keep their own unique database relevant to their line of work
- There can and should be collaboration between EC and NIA.
- There needs to be intersectoral collaboration across board without necessarily compromising the constitutional independence of the EC.
- Avoid expensive and error prone duplication
- Duplicate removal
- Data cross referencing, and authentication
- Error checking and correcting
- Automatic updates (eg age).
- Quick, easy, inexpensive update
- Perfect base for geo-referenced data (house nos.)
- Add biometric data at a go

STRATEGY

1. Multi sectoral team to achieve single national multipurpose database
 1. Strategy Team
 2. Law Team
 3. Logistics and Finance team – Resource sharing
2. PILOTS
 1. Prepare and Pilot the system with unit committee and district assembly elections this year and By-Elections, assuming there is one
 2. 2012, at least select some polling stations and pilot

3. **COSTING AND FUNDING**

There were 2 scenarios that the group looked at. This was on the basis of a standalone project that is if the Electoral Commission was to do everything entirely on its own. The other scenario was where the EC would collaborate with other institutions to achieve the

objective of an electronic biometric voter register. On the basis of the above the estimates were as follows:

	Item	Estimated Cost in Euro
1	Bio Data Capture	6 million
2	Database construction	8 million
3	Printing & Cards (6 MO Printers and 8 million cards)	7.3 million
4	Additional 8 million cards	4.3 million
5	Interfacing with other systems	5.4 million

This is the cost of the NIA project which is designed to cover a population of 21 million

Lower limit

Item	Estimated cost in Euro
Printing of cards	6.2 million

It is expected that depending on the scope of project and the extent and nature of collaboration between the EC and other institutions the actual cost of the project will be between the lower limit of €6.2 million and the upper limit of €31 million

The funding sources are as follows:

- Budgetary
- Donor
- Loans

Day Two – ELECTRONIC VOTING

Address by Fmr. President John Agyekum Kufuor

The address by Former President Kufuor was delivered by his spokesman, Frank Agyekum. He extended the regards of the former president to participants at the conference and stated that President Kufuor would have wished to participate in the conference but had to go to Tunisia to attend to some pressing issues.

President Kufuor, he said, has been a firm believer in the periodic enhancement of Ghana's electoral system right from the introduction of transparent ballot boxes in 1996, where he was the New Patriotic Party's flagbearer, to the introduction of photo ID cards for election 2000.

This periodic enhancement is necessary to deepen the credentials of Ghana's democratic experiment as this led to "free and fair" elections in this country. However, these enhancements have still not taken away the associated problems of paper-ballot system Ghana currently employs. He stated problems such as multiple registration and voting, ballot box stuffing and ballot box theft, among others.

These problems, if not tackled head-on, could have dire consequences for Ghana and consign us to the path of electoral related violence as witnessed in certain countries on the African continent.

It is against this that Frank Agyekum stated that the former President is a convert of the introduction of technology into our electoral system as he believes firmly that this will improve the efficiency of our electoral commission, cut down cost and drastically reduce tensions associated with the length of time it takes for election results to be declared in Ghana.

He urged participants to interrogate carefully the issues at hand so as to make sure that Ghana becomes the winner at the end of this conference.

The Role of E-Voting In Eliminating Election Related Violence and Corruption – Prof. Mike Oquaye, 2nd Deputy Speaker Of Parliament

Professor Mike Oquaye, 2nd Deputy Speaker of Ghana’s parliament, who is also a member of the Governing Board of DI, spoke on how biometric voter registration and electronic voting can serve as a conflict prevention mechanism. He stated that in politics, the stakes are always high since the ultimate prize was political power. In Africa, the stakes were higher still since state power was virtually the sole denominator in polity, society and the economy and that the absence of a countervailing power and the system of ‘winner-takes-all’ makes politics in Africa virtually a do-or-die affair.

He said that a study of conflict in most African states revealed two main causative factors – ethnicity and elections, with the latter often propelling the former. He cited examples in elections of Western Nigeria in 1964, and the recently held elections in la Cote d’Ivoire, Togo, Benin, Kenya and Zimbabwe that have confirmed the above stated phenomenon.

Ghana is viewed as a success story in Africa’s democratization experiment because of having held elections from 1992 to 2008 and on two separate occasions, in 2000 and 2008, incumbents have handed over power peacefully to the opposition. But he stated that it would be the height of folly should Ghana rest on her oars.

Prof. Mike Oquaye said the voter register in Ghana has been a fertile source of conflict right from 1992 to date as the register continued to be the subject of controversy and should Ghana continue to maintain a voter system that was prone to fraud, the register would continue to give credence to those who sought to incite a section of the populace to reject election results.

He went on to give examples of counter statements issued by the New Patriotic Party (NPP), ruling party at the time; the National Democratic Congress (NDC), the opposition at the time; and statements issued by the Electoral Commission which went on to fuel the allegations about a bloated voter register for the 2008 elections and therefore providing a “battlefield” for a possible rejection of the results.

A vivid description of how scores of NDC youth wielding machetes, clubs and stones invaded the premises of the EC as the country was awaiting results of the elections was painted by Prof. Oquaye. To them (NDC youth), the NDC had won already and any declaration to the contrary would result in bloodshed.

He then asked, “If NPP youth were to take a similar position in the future, and assuming for the sake of argument, their opponents were genuine winners, what would happen?”

Ghana needed to re-examine her electoral processes as well as strengthen the system before it destroyed us. He also said the ethnic connotation that related to the 2008 elections need not be ignored as they could generate into ethnic strife and civil war if human wisdom did not seek scientific solutions to these simmering problems.

Recently held parliamentary by-elections in two constituencies in Ghana, namely Akwatia and Chereponi, which were characterised by violence gave Prof. Oquaye cause to worry. He said it was not possible to deploy large contingents of security personnel for individual constituencies in future elections as was witnessed in these two by-elections and the solution to pre-empt any such occurrence was by going electronic.

He said if an incumbent government could lose an election with less than 41,000 votes, and with as many as 205,436 rejected ballots, it was imperative that the process be duly enhanced and protected as the only way to perfect the system as much as possible was the introduction of technology in the registration of voters and the actual voting process.

The argument of cost should not stop Ghana neither should the argument of illiteracy which he deemed to be a non-starter as India with over 714 million registered voters and having more illiterates than the entire 24 million populace of Ghana have successfully employed the use of Electronic Voting as tallying and counting are done mechanically, leaving very little room for manipulation.

Prof. Oquaye ended by saying e-Voting could make Ghana safer as the sum total of international research showed that e-voting offered the potential for voting and election management that is an improvement over ballot paper voting. For Ghana, that technological leap could be the defence weapon against the explosion of electoral violence in the future, which could ultimately deal a fatal blow to the entire democratic experiment here in Ghana and with continental consequences.

What Is E-Voting? The Various Types of E-Voting, From USA to Venezuela – Alhaji Salisu Baba (ICT Consultant)

Alhaji Salisu Baba, an ICT consultant, gave a brief presentation as to what constitute e-voting and the various types of electronic voting methods in use across the world.

E-Voting, he said, was the application of ICT to election processes. The introduction of technology into elections has been necessitated as a result of several inherent problems associated with the use of the ballot paper system. He listed some of these problems as being duplicate registration, deceased persons still on the electoral roll, intimidation, electorate manipulation, gerrymandering, the manipulation of demography, and disenfranchisement, among others.

The main types of electronic voting systems included Punch Card systems, Optical Scanning systems, Direct Recording Electronic systems (DRE) and voting over the Internet. Electronic voting systems have been in use since the 1960s, initially with the use of the punch card systems followed much later by optical scanning systems, the DRE and the internet. These systems, he said, are used on a large scale in Belgium, Brazil, India, Venezuela, USA, etc.

Although there was a trend for adopting this technology there are still many countries that preferred hand-marked and manually counted paper ballots, according to Alhaji Salisu. He went on to describe electronic voting processes in 3 countries that have employed the use of technology into the voting processes.

The Case of India

Electronic Voting Machine (EVM) retains all the characteristics of voting by ballot papers, while making polling a lot more expedient. Being fast and absolutely reliable, the EVM saves considerable time, money and manpower. And, of course, helps maintain total voting secrecy without the use of ballot papers. The EVM is 100 per cent tamper proof, he asserted. And, at the end of the polling, just press a button and there you have the results.

The case of the USA

In USA punch card systems are used. Voters punch holes in cards using a supplied punch device, to indicate votes for their chosen candidates. After voting, the voter may feed the card directly into a computer vote tabulating device at the polling place, or the voter may place the card in a ballot box, which is later transported to a central location for tabulation. Although many U.S. punch card systems are being replaced by more advanced systems, many voters still use them. Punch card systems were used by 37.3% of voters in the U.S. Presidential election.

The case of Venezuela

The Smartmatic Automated Election System (SAES) is the means of e-voting employed in Venezuela. SAES is a device-networking platform that allows a large-scale connection of devices, counts, tabulates, awards, and communicates election results. It uses phone lines or cellular or satellite communication to transmit data to tabulating servers located in a

distributed network or in a central location. Results tabulation is done without human intervention, has multiple auditing tools, contains vote encryption tools and stores election results in seven different locations, and more importantly provides a voter-verified paper trail.

He concluded by cautioning that before Ghana considers the introduction of technology into her electoral system, we needed to understand the EC's mission and setting, inclusion of stakeholders and comprehensively addressing cost issues and compatibility of current systems in short and long term planning and most importantly, starting simply with the appropriate technology.

Presentation on Electronic Voting – Mr. Kofi Benti, Imani Ghana

The thrust of Mr. Kofi Benti's presentation on E-Voting was the effect of having a biometric ID card, such as that proposed in his earlier submission on the first day as well as that proposed by the NIA.

With the database created by the National Identification Authority, the EC could create its own credible diametric voter register. On voting day, one could present his/her biometric ID card, data on the candidate is accessed by the Electoral Commission and once the person is cleared, a voting slip is issued and the person can then vote.

He said there has been a constant argument that the illiteracy rates in Ghana are high and the introduction of technology into certain areas of public life, like the introduction of technology into our voting system, will not be feasible.

He countered this assertion by citing the example of filling a form online; once an incorrect entry is made, that entry will not be accepted and will prompt you to make a correction.

To those who said Ghana had too many illiterates to contemplate e-voting, he said rather the solution to illiteracy in Ghana is the introduction of technology into all spheres of the Ghanaian life. "You don't need to be computer literate to use a mobile phone." But, you need to be literate to write a letter. He also argued that people who go to the bank trust the money counting machines to the teller counting their money manually.

The Electronic Voting Machine of India – Gabby Asare Otchere-Darko, Executive Director Danquah Institute

Mr. Asare Otchere-Darko, Executive Director of the Danquah Institute, spoke on the Indian model of electronic voting because it is the model that currently suits Ghana best since it has similarities with the current voting system of Ghana. He gave an elaborate demonstration on how the EVM of India works. After being taken through various models, the conference settled on the EVM as the most appropriate technology for Ghana.

The 2009 Indian election was the largest democratic election in the world to date with 714 million registered. There are a total of 828,804 polling stations, a 20% increase over the 2004 figure. A total of 1,368,430 Electronic Voting Machines (EVMs) were deployed across the country for this exercise. In a mere 4.5 hours, results for 7 million votes had been declared as opposed to the traditional system of 4 days for the same amount of votes.

According to Mr. Otchere-Darko, the idea of introducing an electronic voting machine was mooted in 1977 by the Chief Election Commissioner of India. The challenge of producing an electronic voting system required that the machine would fit into the existing election procedure, appear familiar to the voter, address the scepticism of political parties and intelligentsia including the press and finally evolve a machine and procedure which would be transparent and acceptable to all.

Two companies, Electronics Corporation of India Limited and Bharat Electronics came out with models that were extensively tried out across the country. Publicity campaigns were run in various forums and feedback used to fine tune the machine. He disclosed that a team would be sent to India to study the Indian model at close quarters.

The Electronic Voting Machine was widely accepted by all as it also saved expenditure on printing, storage, transportation and security of ballot paper to the exchequer.

The Electronic Voting Machine consisted of two sub units; namely the Control Unit which is operated by the Presiding Officer and the Ballot Unit on which the voter makes a choice of candidates in an election.

On polling day, the voter is identified from the voters list and records his presence by a signature or thumb impression. The Presiding Officer presses the “Ballot” button on the Control Unit permitting one vote. The voter then proceeds to the polling cubicle and after perusing the ballot paper on the Ballot Unit, presses the key against the candidate of his choice.

A red lamp glows indicating to the voter that his vote has been cast in favour of that candidate. The casting of the vote results in a beep in the Control Unit indicating to the Presiding Officer that a vote has been cast. He then proceeds to release another vote by pressing the “Ballot” button and the process continues.

Once voting for the day is over, the cap on the “Close Button”, which is found on the Control Unit, is removed and the button pressed thus no longer accepting any more votes. The cap is then replaced. The unit is then switched “Off” and the interconnecting cable disconnected

The EVMs are then transported to a central point where collation takes place or as pertains to Ghana, the results can be declared at the polling station.

Mr. Otchere-Darko stated that the advantages of EVMs far outweigh the ballot paper system among which are:

- Modernises the election process
- User friendly – can be used even by illiterates
- Simple to operate and can be installed in a short time
- Preserves voting secrecy
- No scope for invalid votes
- Facilitates quick and accurate counting – possible to declare results instantaneously
- Re-usable by simply erasing votes recorded in earlier poll

Electronic Voting: The Case of Ghana's Challenges – Fifi Donkor, Gproject.

The case of Ghana's challenges towards going E-Voting was articulated briefly by Fifi Donkor, a local software developer.

He began by highlighting the problems that have dogged Ghana's current electoral system such as ballot box stuffing, rejected ballots, tampering of ballots in transit, errors associated with counting and collation of final results.

The remedy for the problems associated with Ghana's voting required a system that was accurate, guaranteed anonymity of a person's vote, and declared the winner in a very short time.

The technology for solving such problems could be by biometric identification, introduction of an appropriate technology that suites our environment and conditions.

He ended by saying that local developers should be given the chance at finding solutions to these problems since they had a firsthand view of the problems Ghana was facing. A similar point had been made by Mr Bentil who disclosed that students at Ashesi University had already developed election automation technology.

COMMUNIQUÉ

AT THE NATIONAL CONFERENCE ON BIOMETRIC VOTER REGISTRATION AND E-VOTING IN GHANA

**8TH – 9TH FEBRUARY, 2010
ALISA HOTEL, NORTH RIDGE**

Under the auspices of the 2010 Danquah Institute Governance and Development Dialogue series with support from the World Bank and the Friedrich Naumann Foundation – a conference attended by representatives from the Executive, the legislature, the Electoral Commission, political parties, civil society groups, ICT organisations, and the mass media.

PREAMBLE

At the National Conference on Biometric Voter Registration and E-Voting in Ghana held at Alisa Hotel, North Ridge, Accra between 8th and 9th February, 2010, we the participants, including political parties, civil society groups, ICT experts, and legislatures:

AGREEING THAT

Some of the major difficulties which have affected our general elections since our return to constitutional rule in 1993, and which nearly marred the 2008 general elections have included:

- A bloated electoral register
- Conspiracy theories
- Multiple voting
- Voter impersonation
- Dud ballot papers
- Ballot box stuffing
- Ballot box theft
- Spoilt ballot papers
- Violence
- Intimidation
- Disenfranchisement of prospective voters arising from difficulties in registering during voter registration exercises and
- Long periods between the time voting ends and when results are declared.

RECOGNISING

The periodic strides made to our electoral system to enhance its integrity in the past; those warning signals from the 2008 elections call as a matter of urgency for significant, considered changes to be made in order to rebuild voter confidence in the system.

CONSIDERING

Ghana's role as a beacon of hope for the success of the multiparty democracy experiment in Africa, the consequences of Ghana slipping back are too grave to contemplate for Ghanaians, in particular, and Africans, in general.

THEREFORE

Every effort to enhance the integrity of Ghana's elections must be appreciated in not only its domestic context but in its broader promotion of the continent's integration and prosperity agenda based on the principles of good governance, multiparty democracy, respect for the rule of law, individual liberty and human rights, and the collective wellbeing of the African peoples.

REALISING THAT

After interrogating, all the relevant issues at the conference, not only is the compilation of a new biometric-based voter register by the Electoral Commission feasible for 2012 but that it must be done.

REALISING FURTHER THAT

The introduction of electronic voting in Ghana is both feasible and desirable and that information on the technology must, henceforth, be opened to deeper and wider public scrutiny and understanding.

ACKNOWLEDGING THAT

On Tuesday, 12 May 2009, the Electoral Commission and seven political parties including the National Democratic Congress (NDC), the New Patriotic Party (NPP), the Conventions People Party (CPP) and the Peoples National Convention (PNC) through the Inter-Party Advisory Committee (IPAC) endorsed the compilation of a new voter register based on

biometric technology as the solution to multiple registration and other electoral defects associated with voter registration in Ghana.

ACKNOWLEDGING FURTHER THAT

While a biometric voter register can resolve the illegal practice of multiple registrations, it will, nevertheless, not arrest entirely the problems confronting our voting system, including multiple voting due to the normal expectation of non-100% voter turnout and the anticipated absence of an electronic biometric data identification/verification system for individual voters at the polling station on voting day.

APPRECIATING THAT

Our electoral system will be more democratic, credible, less costly, and free from errors, delays, violence, fraud, intimidation and other electoral malpractices that frequently undermine the credibility and general public acceptance of our elections, if we institute a biometric registration and electronic voting system in Ghana.

APPRECIATING FURTHER THAT

The Electoral Commission may be stretched by its multifunctional timetable, including, undertaking local government elections in 2010, a compilation of a new biometric-based voter register, a possible national referendum on Constitutional Review Recommendations and re-demarcation of constituency boundaries all before the 2012 general elections and that all these would lead to budgetary calls on the Consolidated Fund:

HEREBY RESOLVE THAT

1. The Government of Ghana, all the political parties and the Electoral Commission and civil society pursue vigorously the implementation of a biometric voter register as endorsed by the Electoral Commission and the seven political parties on Tuesday, 12 May 2009 as a matter of urgency and necessity.

2. The Government of Ghana should enlist the support of Ghana's development partners in order to provide the Electoral Commission with the required financial and other resources to enable the Commission undertake the biometric registration of voters as a matter of urgency and necessity for its timely application for the 2012 elections.
3. The Electoral Commission should produce a credible biometric voter register by 2012.
4. The EC and other cognate agencies, such as, the National Identification Authority, the Ghana Statistical Services, the Births and Deaths Registry and the National Health Insurance Authority, should collaborate and produce a comprehensive national database.
5. Parliament should enact appropriate data protection legislation for Ghana in order to protect biometric and other personal data of individuals stored in government information repositories in order to protect the sanctity of the privacy and liberty of the individual.
6. The Electoral Commission should adopt an appropriate electronic voting system for all national elections in Ghana as a means of eliminating the incidence of multiple voting, spoilt ballot papers, delayed counting, collation and declaration of election results and other related problems and that appropriate electronic voting system must be able to operate independently without depending on either electricity or an internet infrastructure.
7. A public education by the Electoral Commission and the National Commission on Civic Education must be done on the advantages and applications of biometric technology to our voting system and that the mass media and civil society groups must play an active role in this public education drive.
8. Local Information & Communication Technology experts and organisations must play a leading role in the development, adaptation, application and education of electronic voting machines and systems in Ghana.

9. The Electoral Commission should begin with preparations for the implementation of electronic voting on a pilot basis prior to its use in a national election.
10. Political parties should give serious consideration to using electronic voting for the election of their party officers and candidates, primarily as a way of reducing long hours of voting and counting at party conferences and in helping the case for the adoption of a national electronic voting system.
11. All stakeholders including the Executive, Legislature, Judiciary, the Electoral Commission, the National Commission on Civic Education, the political parties, the media, and civil society organisations should undertake public education on the merits of and necessity for an electronic voting system and work towards its urgent implementation in our electoral system through advocacy, provision of budgetary support and appropriate electoral and other legislative reform.