

NATIONAL CONFERENCE ON VIABILITY OF ELECTRONIC VOTING IN GHANA

PROPOSED DATE: DECEMBER 7, 2009

VENUE: ALISA HOTEL, NORTH RIDGE

TIME: 09:00AM – 05:00PM

With December 7, 2009 marking exactly a year since the first round of the 2008 general elections, the Danquah Institute will convene a major national conference to examine the viability of an electronic electoral system in Ghana for the 2012 elections. The date December 7 has been chosen for symbolic reasons and, also, as a publicity strategy to focus maximum public attention on this single agenda conference – e-voting for Ghana. The timing is also useful, considering next year's national census programme and the second phase of the National Identification registration exercise. The event is being organised with the help of professional event organisers, Global Media Alliance (contact person Vivek Sharma vsharma@gmaworld.com).

WHY THIS CONFERENCE NOW?

In Ghana's volatile and charged partisan political environment, it is extremely important that we have a trusted election process, where elections will be regarded as fair, even by the losing side. **The purpose of this conference is to interrogate deeper the issues and concerns about e-voting. If India, with more illiterates than the entire population of Ghana, with 714 million registered voters, 828,000 polling stations, with many in areas with no electricity, could deploy one million Electronic Voting Machines (EVMs) for an election with more than 100 political parties and not register any notable voice of protest, then Ghana should not shy away from examining the viability of an electronic electoral system.**

In May, a forum was organised by the Electoral Commission in collaboration with KAB Governance Consult and the Canadian International Development Agency (CIDA), under the theme "Safeguarding the Integrity of the Ballot Project". A historical commitment was made that day. Ghana's main political parties endorsed a Biometric Voter Register as the best way to guarantee a credible database of voters.

As in Bangladesh, the biometric data collected during a national registration exercise can be used cost-effectively to develop both a national ID card and a voters' register. But, as a result of

the absence of any nationally coordinated vision or programme on this, four regions – Western, Central, Eastern and Volta (making up 38.8% of the national population) - are already captured in the ongoing National Identification biometric registration project. Six regions (61.2% of the population) are left to go. There is no reason why the exercise for the remaining six regions cannot be coordinated to capture data for both the national ID and voter register, leaving the EC with only the other four regions to undertake independent biometric registration exercise, but with the benefit of the census findings. In March next year, the national census exercise begins. The National Conference on Viability of Electronic Voting seeks to draw attention to how these three major national projects (census, national ID and voter registration) can be coordinated to cut cost, achieve greater efficiency and improve public confidence through the checks and balances that such a joint exercise provide.

RELATED PROBLEMS OF THE DECEMBER 2008 ELECTIONS

Bloated Electoral Register:

Voter registration is the gatekeeping process that seeks to ensure that only those eligible to vote are indeed allowed to vote when they arrive at the polls to cast their votes. So long as Ghana maintains a voter registration system that is prone to fraud, the register shall continue to give credence to those who seek to incite a section of the populace to reject election results. Both the New Patriotic Party (NPP) and main opposition National Democratic Congress (NDC), at the time, accused each other of encouraging non-citizens, ghost names, as well as underage Ghanaians to register ahead of the elections. Speculations about and evidence of a bloated voter register went very far to undermine the credibility of the December vote. It was at one point estimated that the national voter register was bloated by some one million names.

The NDC alleged that the register for Ashanti region, the perceived stronghold of the NPP had been bloated, but it failed to produce evidence when it was asked to provide one.

In the words of Dr. Afari Gyan concerning Ghana's 2008 voters register;

“If our population is indeed 22 million, then perhaps 13 million people on our register would be statistically unacceptable by world standards. If that is the case, then it may mean that there is something wrong with our register.”

After conceding that the voter register was very bloated, The EC Commissioner appealed thus: “All of us as Ghanaians, if we think the figure is not realistic, have a collective responsibility to try to clean the register.”

Political parties exploited public knowledge of a bloated voter register to feed their fears or allegations that there was a plot by a party or between a party and the EC to rig the December polls. This gained legitimacy in the minds of several Ghanaians, including some in the security agencies, therefore providing a 'battlefield' for a possible rejection of the results. The spectre of hundreds of very angry young men wielding cutlasses at the vicinity of the EC headquarters last December should at least remind us of how close Ghana got to becoming another Kenya instead of *the* black star of hope that Africa can indeed hold 'normal' general elections.

CONFERENCE OBJECTIVE

Though, an electronic electoral system seems a very viable option, a country like Ghana cannot go e-voting without first mobilising the collective commitment of the government, the EC, political parties, security agents, civil society, particularly the media, and voting public. To go e-voting requires research, funding, educational efforts, and new standards and testing processes. Bringing together both international and local experts on electronic voting technology and practice, with stakeholders in Ghana's electoral system, this event will seek to advance understanding of the benefits and challenges of utilising electronic technology and help the nation make an informed decision on whether e-voting is a viable option as we seek to enhance the reliability and security of future elections. This is what we seek to achieve with the December 7 conference.

WHY CONSIDER E-VOTING AS AN OPTION

The sum total of research shows that e-voting offers potential for voting and election management that is an improvement over ballot paper voting or non-biometric registration. For Ghana, it could be the defence weapon against the explosion of electoral violence in the future and with it, a fatal blow to the entire democratic experiment.

The Electoral Commission of Mozambique will be invited to speak on their experience of using a biometric register, in the wake of their October 2009 election in which they will use this technology for the first time. Comprehensive analysis of the cost, risks and requirements of the system will help address existing concerns and hopefully overcome remaining reservations. International experts such as **Dr. Edwin Joseph Selker** have been invited. Dr. Ted Selker is an American computer scientist who headed the Context Aware Computing Group at the MIT Media Lab and is the MIT director of The Voting Technology Project and Design Intelligence. Selker holds 56 US patents. His publications include: "Voting Technology: Election Auditing Is An End-To-End Procedure," *Science*, 2005; "Security Vulnerabilities and Problems with VVPT,"

Ted Selker and Jon Goler, a report of the Caltech/MIT Voting Technology Project, Apr. 2004;
"Fixing the Vote - What Electronic Ballots Can Do For Democracy," *Scientific American*, 2004

There are plans to invite officials and experts from India, Bangladesh, Mozambique and the European Union.

BIOMETRIC VOTER REGISTER FOR GHANA

There is a very strong case for biometric-based credentialing solution for Ghana's Voter Registration Project. Not long after the 2008 elections, the Danquah Institute started to advocate for the consideration of e-voting. This was first dismissed. But shortly afterwards, the Chairman of Ghana's Electoral Commission, Dr. Kwadwo Afari-Gyan, stated that the EC was looking to adopt a biometric system of registering voters prior to the next polls, but will stop short of implementing electronic voting for election day.

Delivering the CDD-Ghana 5th Kronti ne Akwamu lecture on 'The Challenges to Conducting Free and Fair Elections in Emerging African Democracies: The Case of Ghana.', Dr Afari-Gyan stated in response to a question by the Executive Director of the Danquah Institute, Gabby Asare Otchere-Darko:

"The Commission is considering biometric registration of voters but as for biometric voting, I don't think the country is ready for it. If we do, I believe some people will start asking whether the Castle has not programmed the machines with some figures to their advantage."

On Wednesday, 18 March, 2009, Dr. Afari-Gyan announced on radio that a completely new voter registration exercise will take place to compile a new credible database for the 2012 general elections. The exercise will employ the best of technologies, including the use of biometric registration to beat fraudsters who attempt to exploit the voting exercise to their advantage. Dr. Afari-Gyan was guest of Kojo Opong-Nkrumah on **Joy FM's Super Morning Show**.

Conceding that Ghana was lagging behind in the use of technologies in the electoral process, he said any new improvements in the system will have to include the best technologies, including biometric systems that will beat the fraudsters. He expressed the hope that the population census for the country would be conducted for 2010 to form the basis for the new registration exercise. See and listen via: <http://news.myjoyonline.com/politics/200903/27689.asp>.

On Tuesday, 12 May, 2009, the seven leading political parties (including NDC, NPP, CPP and PNC) through the Inter-Party Advisory Committee (IPAC) endorsed a biometric voter register as the solution to multiple voting and impersonation in Ghana's electoral system. The IPAC, therefore, charged the Electoral Commission (EC) to begin the preparation process for biometric voter registration.

"This is very necessary to deal authoritatively with practices of multiple voting and impersonation that tend to undermine public confidence in declared election results," the

seven parties stated in a communiqué issued at the end of a three-day self-assessment forum at Akosombo. Ref: <http://news.myjoyonline.com/politics/200905/30029.asp>.

Yet, we find it surprising that this issue has not become topical since EC officials mentioned it earlier in the year.

BIOMETRIC VOTER REGISTER - THE BANGLADESHI EXPERIENCE

The website of DFID explains: "A new way of registering Bangladesh's voters will ensure that, when the country goes to the ballot box, democracy is always the winner. Rather than just recording voters' names, the new voter roll also carries their photographs, guaranteeing that one person gets only one vote and that the face of the person casting that vote is the same as the one on the roll."

Ref: <http://webarchive.nationalarchives.gov.uk/+http://www.dfid.gov.uk/casestudies/files/asia/bangladesh-voting.asp>

The Bangladesh Voter Registration Project, a joint effort between Bangladesh's Government and donors, led by DFID, registered more than 80 million citizens using biometric face and fingerprint technology in what is described as the 'largest biometric database in the world'. Ms Renata Dessallien, UN Resident Coordinator and UNDP Resident Representative, at a function marking the celebration of the successful completion of voter registration, organised by the Election Commission of Bangladesh on July 22, spoke of it in glowing terms. It was "a truly historic achievement," because never before "have so many people been electronically registered in such a short time" in any other country in the world. What was impressive was the immense scale of the undertaking, the accuracy of the list, the elimination of duplicate and fraudulent entries. "If there were a Nobel Prize for voter lists, Bangladesh would be the clear winner!" In comparison to all previous efforts, the current effort has yielded a faultless voter list, one that is computerised, consisting of a data-base of 80 million 500 thousand 723 voters with photographs and fingerprints. It has cost only Tk 424 crore (US\$68.5 million) and has been successfully completed in a mere 11 months.

In January 2007, national elections in Bangladesh collapsed in scenes of violence two weeks before they were due, after a voter roll was published containing more than 21 million wrong or duplicate names. According to DFID, surveys of the new voter roll have shown "error" rates between 1 and 2.5%, compared with error rates on the previous list of up to 20% (these errors are due largely to voters who are abroad for reasons of work).

- With six months to the December 6 general elections in **Bolivia**, the country embarked on a biometric voter registration exercise. How successful was this, looking at the short time allotted to this? How credible was this? The Carter Centre may tell us.

GENERAL ISSUES ABOUT E-VOTING TO BE DISCUSSED AT CONFERENCE

- **How close did Ghana get to suffering major violence outbreak in Election '08**
- **How this was linked to bloated register, multiple voting, voter impersonation, ballot box theft, fraudulent use of 'spoilt' ballot, and how the possibility of the above electoral crimes motivated intimidation, harassment and assault of party polling agents and voters**
- **How do we protect the integrity of the election from the point of voter registration to the moment of winner certification?**
- What are the factors that can influence public confidence in elections?
- Cost-benefit analysis of electronic electoral system vs the current paper-based system
- Sources of funding for an electronic electoral system
- Why Biometric Voter Register is the answer
 - Possibility of coordinating Biometric Voter Registration exercise with National Identification Registration exercise and National Census
- Why e-voting may be the answer
 - Challenges and flaws with e-voting
 - Advantages of e-voting
 - Presentations on various options of e-voting
 - Conference to decide which option may suit Ghana for 2012
- Two areas of particular significance about e-voting: security and usability.

Security

- How is the security of voting stations maintained to ensure that no difficult-to-detect tampering can occur between receipt from the vendor and use in the election?
- What steps have been taken (either technically or procedurally) to limit the damage an attacker might be able to inflict?
- How can election officials be sure that the voting systems in use on Election Day are in fact running the software that was qualified/certified?
- What information must be collected on Election Day (and in what formats) to ensure that subsequent audits, recounts, or forensic analysis can take place if they are necessary?
- What physical security provisions will be put into place at polling places after the voting stations have been delivered before the polls open?
- What physical security provisions will be put into place immediately before the polls, while the polls are open and immediately after the polls close?
- How are the results from polling stations communicated to the central tabulation authority?
- How does the central tabulation authority aggregate vote totals?
- What physical security provisions will be put into place at the central tabulation authority?
- What roles can postelection auditing and investigation routinely play to increase the likelihood that fraud or other problems will be detected?

Usability

- How is an electronic voting system engineered to avoid error or confusion?
- What accommodations have been made to address the special concerns and needs of people with special needs (illiterates and physically challenged)?
- What is the error rate in capturing votes of any given system? How is that error rate determined?

- What are the submetrics of usability that are applied to evaluate and compare systems?
- How long does it take a first-time user to become familiar enough with the system to use it reliably and with confidence?
- What kinds of educational materials should be prepared and distributed in advance?
- To what extent are practice systems available for use before and on Election Day?
- What voter assistance can the voting station itself provide to users?

OTHER ISSUES PERTAINING TO GHANA

The following are some issues in some quarters as to the viability of e-voting in Ghana

- E-voting will be too expensive
- A relatively short timeframe for implementation prior to the 2012 elections
- How can you trust the integrity of the vendor and the machines?
- How to counter anxieties about system manipulation
- Creation of a separate biometric identification just for the purposes of elections when already the state is implementing a biometric based national identification system.
- How can the public have confidence that software applications for voter registration are functioning appropriately?
- How should voter registration systems connect to electronic voting systems, if at all?
- Will individuals purged from voter registration lists be notified in enough time so that they can correct any errors made, and will they be provided with an easy and convenient process for correcting mistakes or making appeals?
- What standards of accuracy should govern voter registration databases?
- How well has Ghana's voter registration databases perform?

Questions about the Life Cycle of Electronic Voting Systems

1. What is the life-cycle cost of any particular electronic voting system?
2. What assurances can a vendor offer with respect to long-term support?
3. What are alternatives to purchasing complete integrated voting systems?
4. How difficult will it be to change vendors if the original vendor becomes unresponsive or too expensive?
5. What logistical and administrative issues arise regarding the physical management of a voting system?

Questions about Funding and Sustaining Improvement

6. Who will fund the Biometric Registration exercise for 2012?
7. Who will fund e-voting for 2012
8. How will funding be provided for the periodic refreshment of electronic voting systems?
9. How will local research and development on electronic voting systems be supported and performed?
10. What is the impact of evolving standards on deployed electronic voting systems?
11. What are the incentives for and barriers to improving electronic voting systems?
12. What lessons learned relevant to electronic voting can be found in other countries (USA, India, Ireland, Belgium, Venezuela, Jamaica, Australia, Germany, Brazil, etc)?

Conclusion

Whilst Ghana takes pride in its position as, in Obama's words, a "successful model" with "effective governance... in place", we must ensure that this success continues by providing the attention and support necessary to see that our 2012 elections do not again bring us so perilously close to the brink of violence. In the words of the Communication Minister Haruna Iddrisu: "Government recognizes the independence of the Electoral Commission and does not wish to influence the Electoral Commission (EC) in any way, but we believe that the biometric system has enormous advantages that the EC will not ignore."

"Government is ready to ensure that e-voting becomes a reality in 2016 but if things go well we may even start with it in 2012," he told a meeting of ICT and e-governance experts in Accra.

EVENT PARTICIPANTS

The primary target audience for this event will be the Commissioners and experts from the Electoral Commission of Ghana, Nigeria and other invited countries; high-level representatives of the major political parties and Government of Ghana; key figures from bodies such as the National Identification Authority, National Population Council, security agencies, governance NGOs/think tanks, civil society, religious leaders, diplomats, development agencies, mass media, etc whose understanding and support will be crucial for the possible changeover to electronic voting.