



## **RAPPORTEUR'S REPORT**

### **THE AFRICAN E-GOVERNANCE FORUM 2007: *UTILISING ICT FOR MORE EFFICIENT, EFFECTIVE AND INCLUSIVE GOVERNANCE***

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## **Introduction**

This is the Rapporteur's Report on the three-day international conference dubbed The African E-Governance Forum 2007: ***Utilising ICT for more Efficient, Effective and Inclusive Governance.***

The report is in four main parts:

1.0 Executive Summary

2.0 Opening Session

3.0 Conference Presentations

4.0 Conclusion

## 1.0 EXECUTIVE SUMMARY

The three-day international conference on *Utilising ICT for more Efficient, Effective and Inclusive Governance*, dubbed 'The African E-Governance Forum 2007' was organised by the Commonwealth Telecommunications Organisation (CTO) and hosted by the Ministry of Communications, Ghana. Other organisations, which co-sponsored the conference, were Nokia, Microsoft, MTN, Areeba Ghana, CIS Ghana and GCNET Ghana.

The conference drew a wide array of participants from the public, private, business and civil society sectors in Africa and beyond. In all, 23 presentations were made, and 7 panel discussion sessions were held at the conference.

The first day of the conference witnessed the opening ceremony with addresses by Dr. Ekwow Spio-Garbrah, CEO of the CTO, Ghana's Vice President Alhaji Aliu Mahama and Dr. Benjamin Aggrey Ntim, Deputy Minister of Communications, Ghana.

Dr. Spio-Garbrah in his address provided a general overview of the issues and challenges pertaining to e-governance. He noted that the growth of mobile telephony in Africa in recent years has been phenomenal but access to the internet was still poor. This situation hampers e-governance projects on the continent. He emphasised that the aim of e-governance was to facilitate good governance, so without good governance e-governance was meaningless.

Dr. Benjamin Aggrey Ntim said the government of Ghana has developed an ICT policy which is anchored within the country's Poverty Reduction Strategy.

The Vice President of Ghana, Alhaji Aliu Mahama on his part, called for the early implementation of Africa's broadband infrastructure programme to enable the continent reap the full benefits of ICT. He urged delegates at the conference to move away from conference declarations to the critical area of implementation.

Nana Kobina Nketia V, the Omanhene of Essikado Traditional Area of the Western Region of Ghana, chaired the opening session.

After the opening session, five presentations were made on the first day.

The first two presentations were on Ghana: case study of Ghana's ICT4D policy and the Ghana Information and Communications Technology Directorate (GICTeD), an agency under the Ministry of Communications, Ghana, responsible for formulating and implementing ICT development policy.

The first presentation by Prof. Clement Dzionu on the topic *The Ghana ICT4D Process*, noted that for e-governance to achieve the desired impact it was necessary to address certain critical change factors such as citizens' attitude to work. He noted that ICT alone cannot deliver e-government. There was also the need to embark on institutional reform initiatives in order for e-governance projects to produce the desired results and impact.

Presenting the second paper titled *Making E-Government a Reality: Case Study of Ghana's Experiences*, Dr. Sam Somuah noted that GICTeD facilitated e-projects have already touched the lives of ordinary Ghanaians, citing the case of the Computerised School Selection and Placement System (CSSPS) and GCNET (an electronic trade and custom clearance system at the port).

The panel discussion after the first two case study presentations on Ghana demonstrated the challenges and potential benefits of e-government. The challenges facing African countries like Ghana are quite enormous. A clear message that comes out from the presentations and discussion of the session is that Ghana and many African countries are now starting the march towards e-government. This situation provides opportunity for learning and integrating structures to reduce costs and duplication.

The other presentations and panel discussion of the first day took on an international perspective.

Mr. Jacques Bouchard, Senior Policy Advisor, Canadian e-Policy Resource Centre (CePR), made a presentation on the Canadian experience titled *Government On-line: The Canadian Government Experience*. He enumerated the key factors, which guaranteed the success of Canada's e-government project, including the desire to cut public sector waste, strong government commitment, strong oversight responsibility of Parliament and active engagement of business, civil society and the public.

Mrs. Grace Hiwa took participants through efforts by Malawi within the context of limited financial and infrastructural resources, efforts by the government of Malawi to develop the country's ICT through the Department of Information Systems and Technology Management Services (DISTMS) under the Ministry of Information and Tourism.

The last presentation of the day titled *The Private Sector Perspective* was by Mr. Oke, Microsoft Nigeria. He noted that Microsoft is committed to facilitating internet connectivity and penetration on the continent through various programmes such as conducting consultancy services, provision of softwares, database development and ICT infrastructure to reduce the digital divide.

The last panel discussion of the first day of the conference was dominated by the Canadian e-government experience and lessons for African countries, Microsoft ICT promotion in Africa, and the role of the CTO in e-government in Africa. It was largely shared among discussants and the delegates that in the context of Africa, with its underdeveloped private sector, the continent will need more funding than is currently being provided for ICT development, in order to achieve significant impact on the ground. This will require substantial levels of support from donor agencies, international bodies like the CTO and multi-national ICT companies like Microsoft and Nokia in the areas of free and cheaper software, and development of suitable technologies.

Seven presentations were made on the second day of the conference.

The morning session had the theme *Promoting and Enabling E-Governance in Rural Areas*.

Major John Tandoh (Rtd.), Director General, National Communications Authority (NCA), Ghana, and Mr. Rauno Granath, Director, New Growth Markets, NOKIA, demonstrated how rural and underserved areas could be connected to the internet using wireless mobile internet.

However, the panel discussion drew attention to issues of affordability and relevant content services.

The third presentation of the morning by Dr. Tomasz Janowski, Head, Centre for Electronic Governance, United Nations University International Institute for Software Technology (UNU-IIST) provided a framework for developing e-project in developing countries, based on an e-government project in Macau.

The panel discussion of the morning session was mainly on the cost factor in extending ICT to rural areas. It was highlighted that while a lot of technologies exist, they are obviously beyond the means of many people in rural Africa. The challenge is to produce technologies (such as handsets), which provide high-speed mobile internet access at an affordable price for the rural population and the poor. There were strong objections to web-based e-government in Africa; the vast majority of the population do not have access to the internet. Wireless mobile internet provides a viable technological option for 'connecting the unconnected', but cost must be affordable.

The afternoon session of the second day of the conference saw the presentation of four papers. The theme for the session was *Highlighting the Potentials of Enhanced E-Governance*.

Presentations were made by Ms. Sarata Adams, Business Development Officer, Ghana-India Kofi Annan Centre of Excellence in ICT; Mr. Kofi-Boateng Agyei, Senior Operations Officer, The World Bank; Mr. Johnnie Akakpo, Chairman, Ghana Information Network for Knowledge Sharing (GINKS), Ghana and Mr. Vikas Nath, Founder, DigitalGovernance.org Initiative. The session was dominated by discussions on women and ICT in Africa, and the role of international organizations such as the World Bank and CTO in promoting ICT in Africa, and women in particular.

During the panel discussion, some delegates especially public officers and civil society representatives felt that international bodies such as the World Bank are not doing enough to promote ICT on the continent, and only impose their solutions on the individual countries. However, representatives of some of these international organisations felt that 'the onus' is on individual African countries to choose and pick what best suits them from what various international bodies present to them. While the need to assist African countries

and women in particular was generally shared by all, there were differences in the discussion regarding how to move forward on this. Representatives of international organisation felt that individual countries must do more to prioritise their needs with respect to ICT.

The third and final day of the conference witnessed the presentation of seven papers. The presentations covered a wide range of issues from the development of appropriate framework for ICT in Africa, to the youth and ICT and then localisation of ICT in Africa.

The first part of the sessions saw presentations by Ms Dorothy Gordon, Director General, Ghana-India Kofi Annan Centre of Excellence in ICT titled *E-Governance with Impact: Key Lessons in Building the necessary ICT Human Skills in Africa*.

This presentation focused on developing the appropriate human resources for ICT promotion in Africa.

The second presentation was by Alex Weir titled *Low-Cost Tamper-proof Voting System for the Third World*. Mr. Weir's presentation received a number of criticisms for his voting system which seeks to address electoral results through e-voting via mobile phone SMS. The presentation was particularly questioned for its long list of requirements of his e-voting system; cost of operating the system and; the issue of foreign interference.

What came out clearly from the session, whether from the presenters or participants' points of view, are the daunting challenges confronting ICT development in Africa. Also, a point was drummed home that any solution to the challenges of ICT/e-governance in Africa must take cognisance of the existing political and socio-economic context of the different individual countries of the continent.

Three additional presentations were made in the morning. The presenters were Mr. Saqib Nazir, CEO, CIS Ghana; Mr. Olugbenga Adeyemo, Chairperson, The Institution of Engineering and Technology (IET) Nigeria Younger Members Networks and; Mr. Sylvester Nii Kpakpo, Public Relations Officer, Leadership Strategic Africa. It was, however, the presentations by Mr. Adeyemo and Mr. Nii Kpakpo on ICT and youth in Africa which dominated the discussions of the second part of the morning session. Both discussants and participants called for more effort in building the capacity of youth in ICT on the continent of Africa.

Even though the youth and ICT dominated the panel discussion of the session, the discussion and presentations were not thorough enough, in terms of a detailed study on the impact of e-governance on the youth of Africa. This may suggest that there is the lack of information on the subject matter, hence the need for research on the youth and ICT/e-governance in Africa.

The Day 3 Afternoon session, which also happened to be the last session of the 3-day conference, saw two presentations by Dr. Amos Anyimadu and Mrs. Joana Portia Antwi-Danso.

Dr. Anyimadu in his presentation titled *The Mobile Platform and the Promise of E-Government in Ghana*, called for a clear strategy for m-government in Ghana which pays attention to the unique possibilities presented by mobile telephones as well as exploiting the increasing importance of mobile data systems.

Mrs. Antwi-Danso speaking on the topic *Local Language and ICT Localization in E-Governance* noted that ICT was very important. However, what most countries in Africa needed to do was to localise software and develop these in local languages so that majority of the citizens especially women could gain access to it.

The last panel discussion of the conference was dominated by the presentation by Mrs. Antwi-Danso on localisation of ICT. While some participants praised the effort towards localisation of ICT as a welcome move, others were quite sceptical that the move would lead to effective use and application of ICT in Africa. Nevertheless, several other participants felt that under no circumstance should local languages be allowed to disappear or reduced in importance due to the use and application of ICT. The discussion, however, gave little attention to the actual benefits of localisation in relation to the cost and challenges involved.

The three-day conference provided evidence of the benefits as well as the challenges facing ICT and e-governance development on the African continent.

In particular, challenging issues like finance, development of backbone infrastructure, high illiteracy and low computer literacy, and weak ICT and e-governance regulatory and policy framework, require adequate and serious attention in order for e-governance to have any impact on the continent of Africa. These challenging issues provide a basis for further discussions, debates, research and advocacy, and policy considerations on the continent.

## 2.0 OPENING SESSION

At the beginning of the conference, a member of the Conference Organising Team expressed gratitude to the Ghanaian government especially His Excellency Alhaji Aliu Mahama, Vice President of the Republic of Ghana, and Honourable Mr. Benjamin Aggrey Ntim, Deputy Minister of Communications, for allowing the conference to take place in Ghana, and the National Communications Authority (NCA), Ghana, for input and assistance. He also acknowledged the sponsors of the conference including Microsoft, Nokia, Areeba, GCNET and partners such as GINKS.

The Chairperson for the Opening session, Nana Kobina Nketia V, the Omanhene of Essikado Traditional Area of the Western Region of Ghana, thanked the organisers for locating the conference in Ghana. He expressed the hope that ICT would be used as a factor in deepening the democratisation process in Africa.

Taking his turn, Dr. Ekwow Spio-Garbrah, Chief Executive Officer (CEO) of the Commonwealth Telecommunications Organisation (CTO), gave an overview of the issues to be discussed at the conference. He mentioned some of these as the role of e-governance in the development agenda; the impact of technologies such as the internet, mobile phones, software and hardware development in governance, and an assessment of what have worked and what have not, as well as the likely future of e-governance. Dr. Spio-Garbrah also touched on the role of the CTO in the area of e-governance.

The CEO of the CTO noted that all governments use e-governance and e-government techniques. In the last 40 years, governments have used radio and TV to transmit government policies to citizens. E-Government is the process where electronic devices are used to facilitate the work of government. This, Dr. Spio-Garbrah noted, is a subset of e-governance. He said that "we are looking at an ideal situation where governments can interact effectively 24 hours 7 days a week with citizens." E-governance, he noted, is meaningless without good governance. E-governance has a wide range of applications and implications. It covers the use of ICT in linking up central government with provincial and local government structures. It also requires appropriate policies with implications for human development, intellectual and content development.

Global trends in the spread of democracy, promotion of participatory decision making, transparency and accountability of governments are among reasons e-governance has become so important, Dr. Spio-Garbrah said. This has been made possible by the rapid growth in technology, and the increasing liberalisation and privatisation of the ICT sector. For instance, mobile phones have witnessed dramatic increase mostly in developing countries particularly in Africa but internet connectivity in Africa remains very low. Radio and television, however, are still dominant in Africa. Mobile handsets thus give government new methods for communication.

Dr. Spio-Garbrah stressed a number of critical requirements needed for effective e-governance including a high degree of commitment by all parties, especially government and the right regulatory framework; the role of the four Ps (public- private-people - partnership); the need to use research and have the right human resources in place. Due to limitations of these conditions, many e-governance projects fail while some notable successful ones have also been recorded in countries such as India, Malaysia, Egypt and Korea.

The CEO of the CTO explained that the CTO is a one hundred year - old multi-stakeholder partnership organisation limited initially to only the Commonwealth countries, but has now gone global. It focuses on providing advice, consultancies, collaborating with other entities such as the ITU, ATU, WATRA, CRASA, EARPTO, ECOWAS, SADC, PITA and CTU.

Key areas for the CTO were e-agriculture, e-learning (distance education), e-health, e-governance and e-commerce, and working to bridge the digital/knowledge divide. Among several strategies to support e-governance, the CTO has been hosting an e-governance website for more than 5 years to share best practices, research reports, and outcomes of e-projects. Dr. Spio-Garbrah ended his presentation noting that the CTO is ready to work with all partners to improve e-governance, especially in Africa.

Taking his turn, the Hon. Benjamin Ntim Aggrey, Deputy Minister of Communications, Ghana, said the government's business was to reduce poverty and e-governance was a tool that could assist in this direction. Among the advantages of e-governance were improved efficiency, convenience and better accountability. He noted that the development of e-strategies has now become benchmarks by which investors and development partners make their investment decisions. Hon. Ntim Aggrey noted that it was heart-warming to know that many African countries are further developing their own blue prints for establishing the enabling environment to use ICT for development. Ghana has developed the national e-strategy policy framework within the overall national development strategy, namely the Growth and Poverty Strategy (GPRS II).

To enable all stakeholders to make use of ICT, there is the need for the right infrastructure to be in place to enable universal sustainable access particularly to the underserved rural communities. The greatest challenge he noted is the construction and maintenance of infrastructure that supports universal access. Ghana has witnessed an amazing growth in tele-density. From the 2001 level of 464,860 telephone subscribers, the figure is now over 5.4million. This represents over 25 percent tele-density as at the end of 2006. This positive improvement has come about as a result of the continuation of past policies to increase tele-density.

The government is also committed to constructing national ICT connectivity highways on the supply side so that the private sector can take advantage to ride on these networks to provide services from all such networks at an affordable rate, to all parts of the country including rural areas. The major obstacle, he observed, was the attendant high cost of developing the infrastructure. He therefore appealed to the private sector to come in to assist government.

He noted that the Government of Ghana in conjunction with the World Bank has developed a US\$ 42 million e-Ghana Project. Among the objectives of the project was the creation of employment, generation of income, and increase in human capacity in the ICT sector. It was also to enable the country to have more effective transparency in governance and ensure increased engagement with the private sector. Specifically, the e-government component would support the establishment of a government wide network of shared infrastructure and services to significantly reduce the cost of developing and manning e-governance projects.

In his address, the Vice President of the Republic of Ghana, Alhaji Aliu Mahama said that 'the expectations of the people on the continent are continuously growing and it is high time we moved away from the conference declarations and other exhortations to the critical area of implementation'.

He noted that e-governance provides African countries with the opportunities to transform their subsistence agriculture-dominated economies into service-driven and high value-added information economies to successfully compete in the global market.

The Vice President of Ghana stressed the need for African countries to develop the required backbone infrastructure to facilitate ICT development on the continent. In this direction, he called for the early implementation of Africa's broadband infrastructure programme to enable the continent to deploy and exploit ICT to facilitate development.

He mentioned that while national reforms have led to significant increased investments in the telecommunications sector, much of the investment flow did not benefit African countries where there was a crying need for investment to enable ubiquitous access within countries.

Vice President Aliu Mahama therefore called for the opening up of the telecommunications sector to private competition in order to attract private investments.

The Vice President also stressed that the e-governance strategies should ensure that people with disabilities and women have access to the e-facilities.

He touched on issues of security, trust and accountability. He noted that it is imperative for African countries to give due regard to the rights and obligations in such areas as freedom of expression, privacy, security, open source solutions and management of internet addresses and domain names. These, he stressed were essential ingredients of e-governance.

### 3.0 CONFERENCE PRESENTATIONS

#### 3.1 Day One: Tuesday, March 27, 2007

##### Day One: Morning Session

The Day 1 Morning Session of the conference was on the theme *Case Study*.

The session was chaired by Nana Kobina Nketia V, the Omanhene of Essikado Traditional Area of the Western Region of Ghana.

Prof. Clement Dzidonu, Chair, Ghana ICT Policy and Plan Development Committee, Ministry of Communications, made the first presentation.

Speaking on the topic *The Ghana ICT4D Process: Re-engineering Government Service Delivery through E-Government*, Prof. Dzidonu noted that for e-governance to achieve the desired impact, it was necessary to address certain critical change factors such as citizens' attitude to work; adding that ICT alone cannot deliver e-government. There is the need to embark on institutional reform initiatives in order for e-governance projects to produce the desired results and impact.

His address stressed that transforming government system through e-government is expensive, difficult, and a long process. African countries including Ghana are currently at the policy stage. This is an important stage because without policy reform, there would be no guarantee of success of E-government. The issue then he suggested, was how to re-engineer policy, which would involve re-engineering the value system including attitude to work. He noted that without reforms and re-engineering, e-government in Ghana could be very costly and ineffective.

The second presentation was made by Dr. Sam Somuah, Director General, Ghana Information and Communications Technology Directorate (GICTeD), Ministry of Communications.

His presentation was titled *Making E-Government a Reality: Case Study of Ghana's Experiences*.

Dr. Somuah referred to efforts to put in place ICT policies and strategies as contained in Prof. Dzidonu's address. Ghana's ICT policy, he said, came out of the Ghana Poverty Reduction Strategy document, which seeks to leapfrog the country's development.

He explained that the Ghana's ICT policy paper recommended the creation of a single body with overriding responsibility for ICT promotion in the country, hence the establishment of Ghana Information and Communications Technology Directorate (GICTeD) under the Ministry of Communications.

The main function of GICTeD is to coordinate ICT in government. It is also the responsibility of GICTeD to take care of ICT functions so that ministries and departments can focus better on their respective core business. In pursuance of its mandate, Dr. Somuah noted that the Directorate has come out with a network connecting all government agencies. He described the e-government efforts in the country as successful since they have touched the lives of ordinary Ghanaians, citing the case of the Computerised School Selection and Placement System (CSSPS) and GCNET e-projects.

With the CSSPS e-project, the use of computers to arrange candidates seeking admission to senior secondary schools in Ghana in order of merit has resulted in efficiency, transparency and simplicity in the selection process. This is a system that is equitable and responsive to citizens' concerns and has replaced the old system, which was subject to human errors and manipulation. More importantly with the new system, students with mobile phone access are able to text their index numbers in to get their results.

Similarly the GCNeT (an electronic system for trade and custom clearance at the port) has improved the system of clearing goods from the ports. This has reduced the number of days needed to clear goods dramatically from two weeks to two days, as well as improved government revenue significantly.

Dr. Somuah ended his presentation noting that the gains from the two e-projects (CSSPS and GCNET) illustrated the benefits, which can be derived from e-government in Ghana.

## **Panel Discussion**

The panel discussion was chaired by Nana Kobina Nketia V, the Omanhene of Essikado Traditional Area. Other discussants were Dr. Clement Dzionu and Dr. Sam Somuah.

Questions, comments and responses of the session centred on the presentations made. Specific questions were as follows:

- What was the extent of stakeholder (including media) participation and consultation?
- Difficulties encountered in e-projects implementation?
- Risk-sharing and revenue sharing model of the public-private partnership of the projects
- Level of monitoring and evaluation of the projects?

The discussants responded to these questions noting that even though a wide range of stakeholder consultation (including the media) was carried out, the implementation of the two e-projects (CSSPS and GCNeT) have been far from problem free.

Critical challenges have been, limited finance, and working with various stakeholders with their own vested interests.

Additionally, though computers may be in place, what is usually lacking is human resource to operate and maintain the basic infrastructure.

## ***Rapporteur's observation***

The presentation and the panel discussion provided an opportunity to engage the challenges and potential benefits of e-government. The challenges facing African countries like Ghana are quite enormous. However, individual small e-projects provide a basis for scaling up, an issue little discussed in the presentations as well as the panel session. Related to this, is the comment made by an official working with the Ghana-India Kofi Annan Centre of Excellence in ICT regarding the lack of efforts to integrate e-government platforms across the continent.

A clear message that comes out from the presentations and discussion of the session is that Ghana and many African countries are now starting the march towards e-government. This situation provides opportunity for learning and integrating structures to reduce costs and duplication.

## **Day 1: Afternoon Session: International Perspectives**

The Day 1 Afternoon Session was on the theme *International Perspectives*, and Ms. Christine Churcher, Member of the Parliamentary Select Committee on Communications, Parliament of Ghana, was the session's Chairperson.

Ms. Churcher opened the session by remarking that ICT can narrow the divide between the rich and poor both at the national and international levels. There is therefore a strong justification for the adoption of ICT as a national development strategy. She, however, emphasized that there are gaps to be filled, particularly regarding the adoption and application of e-governance in Africa. In her words 'governance to the people is a Herculean task', this requires a lot to be done before e-governance can be used.

After the Chairperson's opening remarks, the session began with a presentation by Mr. Jacques Bouchard, Senior Policy Advisor, Canadian e-Policy Resource Centre (CePR). His presentation was titled *Government On-line: The Canadian Government Experience*.

Canada's e-government project initiated in the mid-1990s is adjudged as one of the most successful e-government projects in the world. This has resulted in high citizenry usage – a survey indicated that 71% of Canadians visited the Canadian government website within a two-week period. Highlighting the success of e-government in Canada, Mr. Bouchard noted that, in Canada, 'we do not use the word e-government anymore for e-government is government'.

According to Mr. Bouchard, the Canadian experience indicates that e-government cannot be implemented without any problems. In his words, the 'easiest part is the technology and the money, the hardest is the change of mind sets'. He elucidated key factors or conditions, which guaranteed the success of Canada's e-

government project. These include desire to cut waste in public sector resource use; government commitment to change interactions with citizens; meeting set targets and deadlines; strong oversight responsibility of Parliament and; active engagement of business, civil society and the public

According to Mr. Bouchard, e-government could lead to job losses in the public sector. However, programmes and strategies should be put in place to address this, as was the case in Canada, to give opportunities and better prospects to people who lose their jobs.

Mrs. Grace Hiwa, Chief System Analyst, Department of Information Systems and Technology Management Services, Ministry of Information and Tourism, Malawi, was the next to make her presentation. Her presentation was titled *Case Study: The creation of a Government Unit to Champion the promotion of E-Gov in Malawi – An Explanation of How the Government of Malawi is Hoping to Assess and Employ ICT to Promote Better Governance*.

Giving the background to the Malawian e-government initiative, Mrs. Hiwa noted that the civil service in Malawi provides services to 14 million people in 4 cities and 28 districts through 26 ministries.

According to Mrs. Hiwa, the private sector in Malawi is not well-developed. As such the country's ICT development is being promoted by the public sector through the Department of Information Systems and Technology Management Services (DISTMS) under the Ministry of Information and Tourism. The objective of the e-governance project is to 'improve the operations and activities of the Civil Service and the Public Sector in Malawi through the deployment and utilisation of ICTs in order to ensure efficient service delivery'. This objective is regarded as very important in Malawi since the public sector is the major sector that currently manages the economic development of the country.

The presentation noted that Malawi's ICT development initiative is a decentralised ICT framework involving the formulation of sectoral ICT plans by the various sector ministries/agencies of government. The sectoral ICT plans are harmonised and integrated into the main national ICT plan developed by the DISTMS under the Ministry of Information and Tourism, Malawi.

The DISTMS also manages cross-cutting ICT strategies in Malawi.

While the Malawian framework provides some advantages including offering the DISTMS (the apex body) the ability to have an accurate snapshot of the level of ICT utilisation, management of ICT cross-cutting issues and staff coordination through the organisation of the ICT structures in government, there are a number of challenges. These challenges include limited authority of the DISTMS due to its position within the Ministry of Information and Tourism; weak legal backing of the DISTMS; high ICT staff turnover due to low remuneration packages and; donor-driven projects within ministries which over ride DISTMS initiatives.

Mrs. Hiwa summed up her presentation by emphasizing that within the context of limited financial and infrastructural resources, and other challenges, the government of Malawi is making strives through the DISTMS to promote good governance through e-government.

The third presentation of Day One (Afternoon session) was made by Mr. Oke of Microsoft Nigeria. His presentation was titled *The Private Sector Perspective*.

Mr. Oke emphasized that Microsoft's core responsibilities include the production and delivery of products and services to meet clients' needs. These core responsibilities of Microsoft, he noted are critical to the development and promotion of e-governance in Africa.

Mr. Oke noted that e-government is critical to the development of Africa since most African states lack real time data and other valuable information on development. This situation he blamed on the limited use and application of e-government in Africa. Mr. Oke provided several reasons cited by governments for the limited use of e-government. These include issues of confidentiality; existing methods of payment, receipts and licensing systems and; poor record keeping

On the role of Microsoft in the promotion of e-government in Africa, Mr. Oke said the company is committed to facilitating internet connectivity on the continent through various programmes and targets –

- Facilitate one billion internet connectivity by 2015
- Conduct consultancy services and provision of softwares to facilitate e-government, database development and ICT infrastructure to reduce the digital divide

- Work hand-in-hand with African governments to improve ICT use and application. Already such working relationships have been established with the governments of Nigeria, Egypt and Senegal.
- Establish an ICT Academy as training and capacity building centre in Africa.
- Organise local courses for local software developing companies to deploy appropriate local context software.
- Develop softwares in African languages

Mr. Oke ended his presentation by stressing that Microsoft is committed to providing support to African governments to promote ICT penetration on the continent as a means of facilitating the adoption of e-government. This is to promote good governance and citizens' participation.

### **Panel Discussion**

The Day One (Afternoon Session) ended with a panel discussion. The discussants were Ms. Churcher (chairperson), Mrs. Grace Hiwa, Mr. Oke and Mr. Jacques Bouchard. The questions and answers (Q&A) of the panel session was dominated by the Canadian e-government experience, Microsoft ICT promotion in Africa, and the role of the CTO in e-government in Africa.

On the Canadian experience, questions were asked about the role of the private sector in e-government, and the extent to which the government of Canada uses other ICTs besides the internet in her e-government project. The response to these questions revealed that the Canadian government would never have been able to implement its e-government project without the involvement of the private sector. In particular, 'research and development (R&D)' of the private sector was very instrumental in e-government in Canada. More significantly, the adoption of e-banking by the banks opened the door to e-government, and was a motivation for the government's initiatives.

On Microsoft, questions were asked on the organisation's position on open-source software, and specific cheap and readily available ICT initiatives by the company, which can be accessed by African countries. The Microsoft representative's response to the issue of open-source software indicated that the company does not treat developing countries including Africa as a special case. It rather seeks to promote open-source software development and commercially viable initiatives in more rewarding ways for developers in Africa. Regarding specific initiatives to assist ICT development in Africa, he noted the many initiatives highlighted in his presentation and a proposal to partner with the World Bank to support e-government initiatives in Africa.

Similar to a question on Microsoft specific initiatives for Africa, the CTO was asked to indicate specific benefits and initiatives for developing countries such as Malawi. The response was that the CTO is not a funding/financial institution. It rather supports ICT and e-governance development in Africa by offering advisory, consultancy services and the dissemination of best practices.

### ***Rapporteur's observation***

It was largely shared among discussants and the delegates that in the context of Africa, with its underdeveloped private sector, the continent will need more funding than is currently being provided for ICT development, in order to achieve significant impact on the ground. This will require some substantial levels of donor support. This will also require the assistance and support of international software companies, especially Microsoft to provide besides funding, free software for e-government projects on the continent. There was a line of difference among civil society representatives and public officials who called for cheap and free software to be made available to African countries, and representatives of software companies such as Microsoft who thought otherwise. In this light, organisations such as the CTO are urged to do more to assist to bridge these differences.

A participant raised the issues of job losses in Africa as a result of e-government and the impact of ICT on poverty reduction; these issues were given little attention during the session. It must be noted that these are very important matters, and thus require attention as they border on issues of finance and national development goals.

### 3.2 Day Two, Wednesday, March 28, 2007

#### **Morning Session: Promoting and Enabling E-Governance in Rural Areas**

The Morning Session of Day Two of the African E-Gov Forum 2007 was on the theme *Promoting and Enabling E-Governance in Rural Areas*.

The session was chaired by Mr. Vikas Nath, Founder, DigitalGovernance.org Initiative.

In his opening remarks, Mr. Nath posed the question “how does e-governance assist the ordinary person on the street?” He stressed that e-governance and e-government are ‘not only to digitalize government but to serve the public’. As such, e-governance should not hinder citizens’ access to government and good governance’. Mr. Nath stressed the need to make the session more interactive by engaging in debates and discussions.

The first speaker of the day was Major John Tandoh (Rtd.), Director General, National Communications Authority (NCA), Ghana. His presentation was titled *How can E-Governance Initiatives be Promoted in Rural Areas with Little ICT Access: The Role of the Regulator in Creating Inclusive Governance*.

The presentation was divided into two parts. The first part of the presentation touched on the viable options available to rural areas with limited or no internet and telephone connectivity. Major Tandoh (Rtd) noted that solutions for such areas lie in wireless systems. These solutions are quick to be developed, and also suitable for scattered communities (such as rural areas), where private commercial operators would describe as non-economically viable. Besides financing which remains a key obstacle to achieving universal access, other critical measures have to be addressed to effectively promote e-governance initiatives in rural areas. These are as follows:

- Developing a domestic backbone infrastructure.
- Availability of telephone services in the rural areas
- Adequate enabling environment for electronic and mobile transactions
- Promoting investment in network development by telecom regulators taking steps to stimulate and promote demand in the underserved rural areas.
- Regulators developing policies to release bandwidth for rural broadcasting.

The second part of Major Tandoh’s presentation looked at measures by the National Communications Authority (NCA), Ghana (a national regulator) to develop and improve ICT access in rural Ghana. These measures include encouraging innovation in a competitive market; promoting and stimulating new investment in communications networks and services, both by new entrants and incumbent operators.

Major Tandoh (Rtd) ended his presentation by noting that with the needed financial support, technologies are available to guarantee universal access to ICT in rural and underserved areas of Africa.

Mr. Rauno Granath, Director, New Growth Markets, NOKIA, was the second presenter of the session. The title of his presentation was *Internet for the Next Billion*.

As a background to his presentation, he stressed the exponential growth in mobile usage in the developing world compared to the internet. His presentation revealed that the first billion Internet user landmark was passed in 2005, and the second billion is expected in 2010, in comparison with the second billion mobile subscription landmark passed in 2005, and third billion expected to be attained in 2007. For the one billion internet access in 2005, 55% was in the developed world with Africa and the Middle East sharing a pitiful 6%. As such mobile internet usage (wireless internet access) represents a much more viable option to increase internet and data penetration in Africa. However, to increase internet access through mobile internet usage would require the clearance of three existing hurdles:

- *Access*: finding the best technologies and ways to build coverage. Wireless internet for the masses requires the development of additional technology.
- *Affordability*
- *Capability*: issues of literacy, computer literacy, keyboard skills, language skills, etc require adequate attention.

And to make it attractive enough for the end user to tackle the hurdles there is the need to address issues relating to *Content* – local content, services and applications are key in getting the growth started.

Resolving issues of access, affordability, capability and content require a public-private-people partnership (PPPP), or a multiple stakeholder approach. The overall aim here is to make mobile internet cheaper, increase speed of network, more economical handsets, and provision of local relevant content.

The third and last presentation of the Morning session of Day 2 was made by Dr. Tomasz Janowski, Head, Centre for Electronic Governance, United Nations University International Institute for Software Technology (UNU-IIST). The presentation was titled *Building a Foundation for Sustainable Electronic Government: From Experience, to Lessons, to a Framework*.

Dr. Janowski's presentation was about an e-government development project undertaken by UNU-IIST for the government of Macau, China.

He walked delegates through the process of conception of the project through survey, development of e-government through training and research. The aim of the project was to establish a good foundation for electronic government development in Macao through:

- e-government readiness assessment;
- software research and development and;
- technology training of the government IT staff;

with focus on middleware support for Electronic Public Services.

The presentation made with details of the project's work plan and activity schedule as well as the personnel involved could serve as a guide or a model for African governments wishing to establish e-government projects. Of critical importance here, is the framework developed at the end of the project, which is referred to as Foundation for Sustainable E-Government.

According to Dr. Janowski, the framework is customizable to local conditions, and suitable to addressing the difficulties typical in many developing countries. It addresses four major areas critical to e-government projects in Africa and the rest of the developing world:

- human capacity development,
- assessment of government's e-readiness,
- development of system support for selected public services,
- promotion of research in the area of e-government

According Dr. Janowski, there are a number of lessons learnt.

At the strategic level, achieving success requires a foundation-building with a vision and multi-faceted actions, and for all project actions to promote cross-agency participation.

At the institutional level, there is the need for a dedicated team of staff with strong public and private sectors participation.

And finally, at the operational level, training and dissemination of information are critical to success.

### **Panel Discussion**

The Day Two (Morning Session) ended with a panel discussion. The discussants were Mr. Vikas Nath (chairman), Dr. Tomasz Janowski, Major John Tandoh (Rtd) and Mr. Rauno Granath. The panel discussion covered all the three presentation made in the morning.

For the first presentation made by Major Tandoh (Rtd), clarifications and comments were made on the following issues:

- Cost of extending ICT to rural areas
- Available support for operators ready to invest in rural and underserved areas
- Service or content needs of the rural population, especially farmers
- Harmonisation of ICT programmes in Ghana

The discussion was dominated by the cost factor in extending ICT to rural areas. A strong observation was made that cost or price should not be used as a basis to deny rural population, who constitute the majority in Ghana and other African countries, access to ICT. Funds need to be mobilised to extend access to rural

areas, using the right technology at an affordable price. Again, the observation was made that telephone points in the rural context are points or centres of development as they tend to attract other developments. Nevertheless, the price must be affordable and the content of the service relevant to the needs of rural people, particularly farmers.

While funds may generally be limited, the pooling of funds from licensed operators is becoming very critical in the case of Ghana. Licensed mobile operators pay 1% of their net profit into a funding pool. This funding pool is managed by the NCA, Ghana. At the end of each year, proposals are sought from the operators regarding rural and underserved areas. The proposals are assessed and the accumulated fund in the pool awarded to an operator, who in turn, takes the lead to invest in the underserved area. Other operators join later, using the infrastructure developed by the project awarded operator.

The panel discussion highlighted the need for harmonizing ICT projects in Ghana and other African countries in order to serve underserved areas adequately. Since projects are sectoral in character they tend to take their own individual growth trends. There is therefore the need to operate an inter-operable framework so that all projects could be hooked onto one platform to avoid duplication and reduced costs.

The panel discussion of the presentation by Mr. Rauno Granath, Director, New Growth Markets, NOKIA, centred on the following:

- Cheap and affordable technologies for 'connecting the unconnected'
- Protection and security of data
- Clarification about the usage of second generation (2G) and third generation (3G) handsets

The discussion indicated that a lot of technologies exist but they are obviously beyond the means of many people in rural Africa. The challenge is to produce technologies (such as handsets), which provide high-speed mobile internet access at an affordable price for the rural population and the poor. It was stressed that while mobile telephone producers such as NOKIA could provide the best available technologies such as handset; efficient and effective service delivery requires operators to install appropriate antennas. The same could also be said about the protection and security of data.

On 2G and 3G handsets, the point was made that they both operate on the same platform. Therefore, the evolution of 3Gs should not result in the abandonment of 2Gs. In other words, 3Gs are not replacing 2Gs.

The panel discussion of Dr. Janowski's presentation centred on the following:

- Cost and budget of the Macau e-government project
- Availability of free software from the project
- Applicability of web-based e-government in Africa
- UNU-IIST projects in Africa

The Macau e-gov project was described as a 'low cost budget' carried out over a period of less than 2 years, with a total cost of about USD\$1 million. However, a delegate noted the question of 'low cost budget' should be seen in relative terms since in many African countries the cost of the Macau e-government could be described as expensive. Making software of the Macau e-government freely available to African countries would require discussions with the government of Macau. As at now, no decision has been taken on this particular issue.

There were strong objections to web-based e-government in Africa. This is because a vast majority of the population are likely to be bypassed since they do not have access to the internet. In other words, the low internet penetration rates on the continent calls for the need to look at seriously non-internet platforms to promote e-governance on the continent.

Currently, UNU-IIST does not have any on-going e-governance project in Africa. However, according to Dr. Janowski, the Institute is ready to collaborate with governments on the continent to share and exchange ideas on e-government.

### **Rapporteur's observation**

There was a general consensus that rural areas like many other indicators are behind in ICT and internet access. Wireless mobile internet provides a viable technological option for 'connecting the unconnected'. However, any attempt to extend services to rural communities must be affordable and the content of the service relevant to the population.

### **Day 2 - Afternoon Session: Highlighting the Potential of Enhanced E-Governance**

Mr. Joe Isaacher, Head of the Civil Service, Ghana, chaired the Afternoon Session of Day 2 of the African E-Gov Forum 2007.

In his opening remarks, he noted that the civil service represents the image of the government to the public.

To enable it to deliver efficient service, the civil service in Africa has over the years gone through several reforms. However, the service has generally not been able to deliver to the expectation of its clients.

ICT has now been generally recognized as one of the strategies by which government through the civil service can deliver efficient services to the public. According to Mr. Isaacher, while this is laudable there are challenges such as infrastructural issues and low computer literacy. The session needs to address some of these issues in order to realize the full potential benefits of ICT in Africa.

The first presentation of the afternoon was made by Ms. Sarata Adams, Business Development Officer, Ghana-India Kofi Annan Centre of Excellence in ICT. Her presentation was titled *African Women and ICT*. The presentation centred on the potential role ICT could play in women's welfare and poverty reduction on the African continent.

According to Ms. Adams, ICTs are key tools to transform the way women live, and the way development takes place. Adding that ICTs have many potential benefits for women, such as promoting women trade through e-commerce, and reducing illiteracy among women through improved access of women to distance learning and distance work programmes.

Ms. Adams, however, noted that ICT use remains difficult, if not impossible, for the majority of women due to, for example, cost, accessibility, language, and the perception of science and technology and by extension ICT as 'male-dominated'. To achieve the full potential benefits of ICT to women would require the removal of obstacles, which hinder the use of ICT by women. Her presentation in the end called for best approaches for getting young women into ICT (through scholarship schemes), and employers and workplace cultures to encourage women to pursue ICT careers by debunking the gender-stereotyped division of labour in IT.

Mr. Kofi-Boateng Agyei, Senior Operations Officer, The World Bank, made the second presentation of the afternoon titled *ICT for Growth and Good Governance in Africa*.

The presentation highlighted the potential role of e-government for efficiency, good governance and economic growth, and the options for harnessing Africa's potential in e-government. As an introduction to his presentation, Mr Agyei noted that studies have shown that countries with better information infrastructure have higher Gross National Product (GNP) per capita growth. He added that an increase of 10 mobile phones per 100 people boosts Gross Domestic Product (GDP) growth by 0.6%, while a 1% increase in the number of internet users increases total exports by 4.3%. However, Sub-Saharan Africa is behind in ICT penetration (fixed, mobile and broadband), with total telephone penetration rate of about 10% in 2006. Mr. Agyei stressed that the challenges facing Sub-Saharan African countries include reforming state owned telecommunications enterprises, provision of national and regional connectivity and backbone infrastructure, broadening access and mainstreaming ICT in development agenda.

Mr. Agyei stressed that the potential impact of e-government on efficiency, good governance and effectiveness are real. As an example of the impact of e-government on efficiency, he cited Ghana's customs computerisation system, which has resulted in 49% increase of custom revenue and a reduction in customs processing time from 2-3 weeks to 1-2 days. And for good governance, the example of Karnataka, India, 20 million land records computerisation system, which saves \$18.3 million (annually in bribes).

The presentation, however, sounded a word of caution. It noted that while e-government initiatives in developing and transitional countries have high potential benefits, there is the need for selectivity of projects since studies have found a success rate of only 15% for such projects. For e-government projects to be successful, they should not only be about technology, but rather change (improving efficiency, transparency

and delivery of public and business services). At a strategic level, focus should be on ICTs as an enabling tool for business and government transformation.

The third presentation of the afternoon was by Mr. Johnnie Akakpo, Chairman, Ghana Information Network for Knowledge Sharing (GINKS), Ghana. The title of Mr. Akakpo's presentation was *Political Mobilisation through ICTs for Good Governance in Ghana: The Challenges for Citizens Engagement*. In his introduction, Mr. Akakpo noted that the opportunities for changing the mode of good governance through ICT coincide with the Africa democratic renaissance. ICT provides not only the means to improve service delivery but also opportunities for expanding the frontiers of political inclusion and participation. This, however, requires the development of the capabilities of citizens and political leadership.

Using two districts (Tamale Metropolitan Assembly and Tolon-Kumbugun District Assembly) in the Northern Region of Ghana, as case studies, the presentation highlighted the challenges of using ICTs in political mobilisation and governance in Ghana. These challenges include:

- Relatively high levels of poverty and illiteracy
- Settlement type: rural, scattered settlements with poorly linked infrastructure
- Patriarchal cultures which tend to marginalize women

According to Mr. Akakpo, the limitations of infrastructure, poverty and illiteracy require platforms which can overcome these challenges in order to promote e-governance in Ghana. There is the need to effectively utilise the traditional media such as the radio and television. In his words 'in Ghana relying solely on computer and internet to promote e-governance is problematic'.

The last presentation for the session and the day was made by Mr. Vikas Nath, Founder, DigitalGovernance.org Initiative. The title of Mr. Nath's presentation was *The Role of International Organizations in Promoting E-Governance Initiatives: How are they supporting digitization of African Governments to promote the realization of MDGs?*

The thrust of the presentation was that there is substantial evidence that ICTs have a decisive role to play in enhancing developmental processes, especially in the wake of global attempt to reduce poverty in the developing world and the adoption of the Millennium Development Goals (MDGs). For instance to achieve goal number of the MDGs (universal primary education by 2015), UNESCO estimates that an additional 15 million teachers will be needed. According to Mr. Nath, this can be achieved efficiently through the use of ICTs through:

- Curriculum delivery via distance learning
- Training of teachers
- Broadening availability of quality teaching material
- Effective educational administration and policy

In the context of Africa, Mr. Nath prescribed five key roles of international organisations to assist African countries to develop their ICT to facilitate the attainment of poverty reduction strategies such as the MDGs –

- Development of ICTD strategies and policies to assist countries to mainstream ICT into national development priorities (e.g. UNECA, UNDP, CTO)
- Enhancing government capacity and public services by assisting countries to use ICT in national and local government delivery of services (e.g. World Bank, AfDB, CTO, UNECA, SIDA)
- Strengthening citizen participation – international organisations facilitating the implementation of strategic development priorities that can empower people and reach to the “poorest of the poor” (e.g. IDRC, UNDP, IICD, and GKP).
- Assist countries through ICT to widen markets, promoting enterprises and modernise industry (e.g. World Bank/ IFC, USAID, DFID, DOT, UNDP).
- Assist countries to achieve nationally-specific development priorities through the deployment of ICT (e.g. IDRC, UNESCO, UNCTAD, GeSCI, IFAD, and SDC).

To achieve the MDGs, there is a broad consensus that no single agency or platform is adequate enough to enable countries reach the set targets. This situation creates a favourable condition for introducing and using

e-governance as a means of reaching the MDGs goals. In the words of Mr. Nath, “e-governance means that MDG is ‘doable’”.

### **Panel Discussion**

The Day Two (Afternoon Session) ended with a panel discussion. Mr. Joe Isaacher (chairperson of the session), Mr. Vikas Nath, Ms. Sarata Adams, Mr. Johnnie Akakpo and Mr. Kofi-Boateng Agyei were the discussant panel members. The issue of women and ICT in Africa dominated the panel discussion and the questions and answers. Specific questions asked were:

- What role international organizations such as the World Bank and CTO have in promoting ICT use by women in Africa? And to what extent are World Bank projects country-owned?
- What is being done to close the gap between women and men regarding ICT in Africa?

Once again the role of international organizations role in ICT development, and women in particular came up for discussion at the panel session. While some delegates especially public officers and civil society representatives felt the international bodies such as the World Bank are not doing enough to promote ICT on the continent, and only impose their solutions on the individual countries, other representatives of some of these international organisations felt that ‘the onus’ is on individual African countries to choose and pick what best suits them from what various international bodies present to them. In the words of a World Bank representative, ‘the Bank has changed over time, and now pursues different solutions for different countries’.

Strong observations were made that currently at the national and international levels relatively very little is being done to improve women’s position with respect to ICT use, as well as to bridge the gap between ICT use among females and males. However, a note of caution was drawn by a discussant (Mr. Nath) that simply providing women with ICT would not directly lead to improved political participation of women in decision-making. The interest and focus should be on improved livelihoods strategies to reduce poverty among women. This, in his estimation will translate into political dividends among women. Nevertheless, there was a strong call for scholarships and other incentives to be provided to women to improve their position with respect to ICT.

### **Rapporteur’s observation**

The role of international organisations in ICT development in Africa came up strongly in this session. While the need to assist African countries and women in particular was generally shared by all, there were differences in the discussion regarding how to move forward on this. Representatives of international organisation felt that individual countries must do more to prioritise their needs with respect to ICT. On the other hand, there was a strong view that international organisations intending to assist African countries do not allow individual countries to develop country-specific strategies but always come with their own solutions.

## **3.3 Day Three: Thursday, March 29, 2007**

### **First Part of Morning Session**

Ms Dorothy Gordon, Director General, Ghana-India Kofi Annan Centre of Excellence in ICT was chairperson of the session. In her opening address titled *E-Governance with Impact: Key Lessons in Building the necessary ICT Human Skills in Africa*, she defined e-government as ‘a loose knit - mix of projects, often not well coordinated and redundant in expenditure’.

Ms. Gordon noted that from the project management perspective, a worrying observation was that most e-governance projects do not work out as originally planned. She cited a research carried out in the developed countries by the University of Manchester, which showed that e-government projects have only 15 percent success rate.

E-government was not about technology but about people. The technology was easy to implement in comparison to the organisational changes necessary to get any value out of, she said. E-government was about change management process and change hurts, she noted. There was no point in introducing e-government if the government employee is not interested in responding.

Ms. Gordon foresaw a number of barriers such as budget constraints, reluctance of public officials to change and issues of trust. She noted that while technology changes rapidly, the rate of adoption is relatively slower, about 7 years. This has huge implications for budgeting and cost of e-projects. In addition, there are issues of skills and training needs.

Timing and sequencing of the e-governance projects were also very important. Certain projects are much easier to do than others, and it would be better to concentrate on these first. Ms. Gordon noted that Africa faces a catch-22 situation where the continent did not have enough trained people, meaning there was the need to draw on expertise from outside.

She ended her address with another definition of e-government as 'a functional approach which focuses on delivering services to the citizens, organised according to the citizens' need, without regard to where one agency's jurisdiction stops and another's begins'.

New technologies have created new opportunities and there was the need to reconfigure the government process accordingly, she concluded.

The next to make a presentation was Mr. Alex Weir, a freelance consultant. His presentation was titled *Low-Cost Tamper-proof Voting System for the Third World*.

Mr. Weir started his presentation by noting that election fraud in Africa was very serious. He also referred to Kenyan activist, Mr. John Githongo's estimation that corruption takes away 7 percent of GNP in Africa. For him, free and fair elections would help provide good governance in Africa. The manual and the electronic voting systems being used in many African countries actually make cheating easier. In addition, most e-voting systems do not have auditing systems.

Mr. Weir has therefore developed a system of e-voting using mobile phone to vote. His system required that voting processing be done outside the country where elections were taking place and results announced on international and national media. According to Mr. Weir, SMS via mobile phones can deliver high level of security. Encryption methods would be used to protect voter identification and deliver the highest possible data security. As an advantage, this system of e-voting provides relatively higher-level aggregation information, which does not enable vindictive losers to punish geographic groups or voters.

### **Panel discussion**

The panel discussion was on the two presentations by Ms. Dorothy Gordon (chairperson) and Mr. Alex Weir.

On Ms. Gordon's presentation, two issues came up for discussion.

First, the issue of the use of expatriates in ICT development on the African continent, and second, where to place the governments' ICT units.

On the first issue, several delegates disagreed with the view that expatriates were needed to man Africa's ICT. A Kenyan delegate noted that Africa had for a very long time depended on expatriates from outside Africa. He was of the view that expatriates take too much money out of a county and perpetuate the colonial mentality. Their working relationships with locals were also not very good so that when they go back the programmes collapse. He said Kenya was now trying to use its own resources to drive its development.

Another delegate noted that the issue, which was even more important than that of expatriates or experts, was one relating to the drivers who were going to deliver at different levels. He said there was the need to streamline the type of technologies needed by African countries and refuse the ones that were not needed.

On the second issue, the chairperson said the issue of where to place the ICT units was controversial. Some countries had separate directorates for e-government initiative, some within office of president or the office of the civil service or ministry of information and communication. A Canadian delegate Jacques Bouchard said it was important to pose the question as to who wants e-government. Whether it was the specialists or the larger society. When it is known where the final destination is, the process of where the directorate and office would be placed would become a simple process. He said in Africa the project should be African driven but Canada has some experience that can be shared. He was also of the view that it was far cheaper and rational to hire or rent equipment than to buy it. This provides a means of addressing the problems of the rapidly changing technologies.

On Mr. Weir's presentation the questions and comments centred on the long list of requirements of his e-voting system; cost of operating the system and; the issue of foreign interference.

The point was also made in the panel discussion that given the long list of requirements needed for Mr. Weir's e-voting system, it would be necessary to estimate how much it would cost. It was pointed out that as shown in Ghana's example, foreigners also have an interest in outcome of elections and therefore they cannot be simply considered as disinterested parties. So bringing foreigners into the voting process would not necessarily lead to fair results. A delegate noted that it might be preferable to try the mobile phone voting idea at polling stations so that paper balloting can be phased out as a first step before moving to something more complicated.

### **Rapporteur's observation**

What came out clearly from the session, whether from the presenters or participants' points of view, are the daunting challenges confronting ICT development in Africa. Also, any solutions to these challenges must take cognisance of the existing political and socio-economic context of the different individual countries of Africa. Both presenters' suggestions and comments regarding the use of foreigners drew sharp exchanges. This indicated that issues of nationalism and sovereignty might still be strong in many African countries. It also suggests the need to explore 'an African solution to an African problem'. In other words, addressing the challenges of ICT development on the continent should have an African face.

### **Second Part of Morning Session**

The first presentation of the session was made by Mr. Saqib Nazir, CEO, CIS Ghana. The presentation was titled *Creating the ICT infrastructure to enable governments to provide a better quality of service to the citizens: An examination of the latest technology that is available for enhancing democracy in Africa*. As an introduction to his presentation, Mr. Nazir said as a businessman and an access provider, he was in a position to understand the difference between what was possible and what was not. He said private businesses were suitably placed to drive projects forward.

Mr. Nazir referred to electronic services already being provided by businesses such as ATMs, and felt governments could learn from businesses and find ways of providing services in convenient ways to their citizens. He also thought the companies were showing the way forward with e-voting in entertainment programmes such as those that allow audiences to vote for certain persons taking part in competitions. The other advantage he saw was the ability of e-processes to cut out corruption since it reduced face-to-face interactions.

He also pointed out that e-processes do not need to be expensive and if considered as business transactions governments could realise what they save by using more efficient methods of interacting with citizens. He said just as private companies are assisting banks to communicate with their customers electronically they could do the same for governments. For example, after the computerisation of market tolls, the Accra Metropolitan Assembly is now generating more revenue than before.

Mr. Olugbenga Adeyemo, Chairperson, The Institution of Engineering and Technology (IET) Nigeria Younger Members Networks made the second presentation of the session.

His presentation was titled *Understanding how African Youths are engaging in E-Governance and Influencing its future: What have been the major barriers to success and how can other African Nations best utilise the Nigerian experience*.

Mr. Adeyemo noted in his introductory remarks that the youth of Africa are ready and eager to embrace ICT. He said his organisation was involved in skill and capacity building, and training of people in ICT skills in the six geographical regions of Nigeria. Also, the organisation was involved in the creation of a digital village in Lagos. He added that skills and capacity building, access to information and access to basic services are critical to the development of the youth in Africa. These needs, he felt can be delivered to the youth via e-government.

However, Mr. Adeyemo noted that there are challenges to the realisation of the goals of e-governance in Africa. He added that the challenges that readily stare the youth of Africa in the face include limited infrastructure; limited access to computers, tele centres; cost of having e-facilities and; lack of computer/ICT training.

He ended his presentation noting that 'support should be given the youths in every way since they are the leaders of tomorrow'.

Speaking on the topic *recognizing the Impact of ICT/E-Governance in the Development of the African Youth: Case Studies from Ghana, Nigeria, Senegal and Morocco*, Mr. Sylvester Nii Kpakpo, Public Relations Officer, Leadership Strategic Africa, made the third and final presentation of the session.

The core arguments in Mr. Kpakpo's presentation were similar to that of Mr. Adeyemo's address. He noted the three interlocking focal areas which are of critical importance to the youth.

These are education, health and employment. Mr. Kpakpo stressed that these three interlocking focal points are critical to the development of the youth. He urged government to explore how best to make these basic services readily available to the youth using e-government.

### **Panel Discussion**

The panel discussion of the session was chaired Ms. Dorothy Gordon. The 'youth and e-governance' dominated the discussion. Contributing to the discussion, Major (Rtd) Tandoh, Director General of the Ghana National Communications Authority (NCA) said his outfit was looking at the development of digital broadcasting to widen people's access to broadcasting services. He praised the young speakers for their proactive positions with regards to ICT and skill development. Maj. Tandoh asked the young presenters to act as ambassadors in order for the youth to take ICT seriously.

Delegates who commented on presentations on youth noted that enough was not being done to train the youth in ICT. A delegate expressed worry that the youth who were vibrant were not being supported to develop their full potentials in ICT. Rather than the youth being employed to run IT units, very old people were often being recycled in a number of organisations.

There was a general call by the discussants and the delegates for more to be done for the youth in terms of ICT.

### **Rapporteur's observation**

Even though the youth and ICT dominated the panel discussion of the session, the discussion and presentations were not thorough enough. In particular, the presentations despite their headings could not present any detailed research or study on the impact of e-governance on the youth of Africa. This may suggest that there is the lack of information on the subject matter. Therefore, research is required to unearth the needs of the youth in the various countries and regions regarding e-government services which could best serve their needs.

### **Day 3: Afternoon Session**

The Day 3 Afternoon session, which also happened to be the last session of the 3-day conference, was chaired by Mr. Jacques Bouchard, Senior Policy Advisor, Canadian e-Policy Resource Centre (CePR). Two presentations were made at this last session of the conference.

The first presentation was by Dr. Amos Anyimadu, Coordinator, Africa Next Knowledge Brokerage and Interaction Project. His presentation was titled *The Mobile Platform and the Promise of E-Government in Ghana*.

He informed the audience that the report of the conference could be found on *myjoyonline.com*, the website of an Accra FM station, JOY, which he described as the best website on Ghana. He was disappointed that very few from the ICT community in Ghana were at the conference. He said this also showed how the community was low on social capital.

Dr. Anyimadu spoke about how mobile phones have caused the number of communication centres in the country to shrink. He said these were replaced by 'space to space' mobile kiosks. However, even in villages such as Moree in the Central Region of Ghana, these were also in danger, as everyone now wants his or her own mobile phone. He felt that the communication centres were important public places and there was therefore the need to formulate policy to ensure that they survive especially in areas where the presence of government is almost nil.

He noted that there has been a high and rapid penetration of mobile devices. There is therefore a clear need to master the lengthening of the mobile value chain. This requires a clear strategy for m-government in Ghana paying attention to the unique possibilities presented by mobile telephones as well as exploiting the increasing importance of mobile data systems.

Dr. Anyimadu noted that unfortunately, Ghana was not well organised as a country to leverage bits and atoms it has achieved to source funding and investments in this direction. He also expressed his frustration at the fact that while software developed in Ghana was being used in Latin America it was not used in Ghana.

The last presentation of the session and of the conference was by Mrs. Joana Portia Antwi-Danso, PhD student at the Department of Akan-Nzema Education, University of Education, Winneba, Ghana. Her presentation was titled *Local Language and ICT Localization in E-Governance*.

Mrs. Antwi-Danso started by noting that ICT was very important now. However, what the country needed to do was to localize softwares and develop these in local languages so that majority of the country's citizens especially women could gain access to them. She referred to software developed in 2006 by researchers at the University of Winneba using local languages.

While Mrs. Antwi-Danso identified several benefits of localization of ICT, she also identified several challenges. These include recruiting personnel not only with specialised knowledge in the local language, but also people who understand foreign languages and cultures, and have ICT technical background. She added that finding such personnel might be very difficult.

### **Panel Discussion**

The panel was made up of Mr. Jacques Bouchard (chair), Mrs. J. P. Antwi-Danso and Dr. Anyimadu. The discussion was dominated by the presentation by Mrs. Antwi-Danso on localization of ICT. While some participants praised the effort towards localization of ICT as a welcome move, others were quite sceptical that the move would lead to effective use and application of ICT in Africa. Nevertheless, several other participants felt that under no circumstance should local languages be allowed to disappear or reduced in importance due to the use and application of ICT.

### ***Rapporteur's observation***

While the issue of localization of ICT offers some potential benefits, the cost implications were given little attention in the discussion. In addition, given the many different languages in many African countries, the question becomes whether to localize ICT in all the different languages or only in a few?

If localization of ICT is to be undertaken in only a few languages what are the criteria for the selection. These issues are of critical importance as they border on national integration and cohesion. Also, what are the actual benefits of localization in relation to the cost and challenges involved? The presentation and panel discussion gave little attention to these issues.

### **Closing Remarks**

In his concluding remarks, Dr. Ekwow Spio-Garbrah, CEO of CTO expressed his gratitude to the Ministry of Communications, Ghana, Office of the Vice-President of Ghana, the sponsors and partners of the conference. He said it is the hope of the CTO that the conference becomes an annual affair so that other countries, which were not in Accra, would have the opportunity to participate in it next time.

Dr. Spio-Garbrah highlighted some of the points discussed at the conference.

These included policy implications of e-governance, ICT/e-governance infrastructure, and local, national, regional and international dimensions of e-governance. Also, the need to bridge the digital divide, the need to have the right regulatory systems in place, issues of the 4 Ps (public-private-people partnership), gender, and localization of ICT. These discussions and debates he noted should continue in order to inform policies and strategies of e-governance on the continent.

#### 4.0 CONCLUSION

The presentations and panel discussions had the following main findings:

1. E-governance has obvious benefits for African countries demonstrated by the few e-government projects presented at the conference as case studies. Nevertheless, there are real and significant challenges to the adoption and applications of e-governance on the continent. These include –
  - Finance
  - Backbone infrastructure
  - High illiteracy and low computer literacy
  - Limited and poor ICT qualified personnel, especially with regards to e-governance
2. Weak ICT and e-governance regulatory and policy framework
  - Weak institutional and legal framework: many public sector ICT promotion agencies have weak institutional and legal foundations
  - Where do we place public ICT agencies?
3. Meeting international and global targets such as the MDGs, and the goals set by the World Summit on Information Society (WSIS).
4. Digital divide along gender (male-female); geographic (rural-urban); north-south; illiterate and literate and; physically challenged
5. Conceptualisation of terms: Even though the decision was made about e-governance and e-government, usage during the conference showed that these concepts have different meaning and understanding for different stakeholders. E-government was often overemphasized over e-governance.

These points above provide a basis for further discussions, debates, research and advocacy, and policy considerations.

The enthusiasm shown by the participants throughout the three-day session showed the great interest and potential for e-governance in Africa.