Information and Communication Technologies in Africa

By

G. Olalere. Ajayi*

Director General/CEO
National Information Technology Development Agency
Federal Ministry of Science and Technology

Nigeria

9 February, 2002

*On leave from Obafemi Awolowo University Ile-Ife, Nigeria.

Situation in Africa..

- Africa has the lowest growth in teledensity of any developing region in the world.
- Has 12% of World population, but 2% of World's main telephone lines.
- Average level of income is the lowest, but the cost of installing telephone line is the highest.
- Highest profit per telephone line and long waiting period for telephone lines.
- Internet connectivity is 0.3% of the world-wide connectivity.
- Recent Statistics has it that there are about 3 million Internet users in Africa with only 1 million outside South Africa.

E-mail: gajayi@yahoo.com, gajayi@oauife.edu.ng

African Situation….(contd)

Problems with Diffusion of ICTs in Africa

- Some of the factors resulting in poor IT diffusion in Africa can be summarised into:
  - Poor Regulatory Environment;
  - The extent of existing ICT infrastructure and cost of access to it;
  - The existing usage of the radio spectrum;
  - The market orientation and openness of the national government to private sector investment;
  - The general investment climate in the country;
  - The resources that national government and their international cooperating partners are ready to invest in IT;
  - The reliability and extent of penetration of the national electricity grid.

E-mail: gajayi@yahoo.com, gajayi@oauife.edu.ng

Some of the Major ICT Initiatives in Africa

- African Information Society Initiative (AISI)
- National Information and Communications Infrastructure (NICI);
- UNESCO - Regional Information Information Network (RINAF);
- Digital Opportunity Task Force (DOT FORCE);
- IDRC - ACACIA initiative;
- The African Virtual University (AVU).
- ICTP ICT INITIATIVE
- ECOSOC UN ICT INITIATIVE

African Information Society Initiative (AISI)

- **Formation:**
  - In May 1995, the 21st meeting of the ECA Conference of Ministers comprising of 53 Ministers for social and Economic Development and Planning adopted Resolution 795(xxx), "Building Africa's Information Highway".
  - ECA then appointed a High-level committee to draft an action framework to utilitise ICTs to accelerate the socio-economic development in Africa.
  - The outcome of this group's work is the document entitled "African Information Society Initiative"(AISI) which was adopted by all African Planning Ministers at the subsequent meeting in May, 1996.

AISI Action Framework can be summarized thus:

- The formulation and development of a National Information and Communication (NICI) plan in every African country;
- Cooperation among African countries to share the success of accumulated implementation experiences;
- Support and partnership with the friends of Africa including bilateral and multilateral development agencies, regional economic organizations and the private sector.
- AISI is expected to enable African leaders, decision makers and planners to position Africa in the world's rapidly expanding global economic system.

National Information and Communications Infrastructure (NICI)

- AISI adopted NICI policies and plans to emphasis the importance of communication in the ICT development plans of the African countries and other ICT initiatives already going on in Africa;
- The Development of NIC policies and plans is being sponsored by African Government, ECA, the Carnegie Corporation of New York and International Development Research Centre (IDRC) Canada.
- Other Partners are UNESCO, Acacia, UNDP, USAID and World Bank.
- Countries like Ghana, Morocco, Rwanda, Senegal, Nigeria, South Africa and Tunisia have made conspicuous ICT developments based on NICI plans and policies.

NICI Development Process in Africa

- There are 23 countries involved in NICI activities and the NICI development processes is summarized thus:
  - Need Assessment;
  - Sensitisation and high level policy workshop;
  - Preparation of NICI Plans which involves:
    - Identification and selection of programmes, projects and initiatives;
    - Development of programme profile for each of the identified programmes, projects and initiatives;
  - Validation workshop (including more sensitisation);
  - Preparation of policy;
  - Resource mobilization;
  - Resource Deployment
  - NICI Programme implementation and monitoring;
  - NICI programme evaluation.

Regional Informatics Network for Africa (RINAF)

- RINAF originated in 1992 as a framework for UNESCO's support to Africa to co-operate and operate academic and public sector computer networking.
- RINAF is supporting and promoting telematics in the sector of public concern, education, research, libraries, media, and culture.
- More than 43 African member states are currently participating in RINAF activities which include:
  - Pilot Project on a telematics consortium for the public services sector (Ghana);
  - Training courses based on national and sub-regional centres of excellence;
  - Learning Networks for African Teachers;
  - Multipurpose Community Telecentres (Benin, Mali, Mozambique, Tanzania, Uganda)
  - African TOP50 Web site, promoting African Internet content.

E-mail: gajayi@yahoo.com, gajayi@oauife.edu.ng

RINAF: Proposed Projects

- Some of the Proposed Projects ideas by the RINAF African Committee:
  - Co-operative development of Web Content with Support for sites in African Languages;
  - Computer maintenance and recycling centres in the public sector (including training in this area);
  - Automatic translation of scientific and technical information;
  - Techniques to facilitate access to African Internet contents (mirror sites, more effective routing, etc);
  - Support establishment of an African Internet Information Centre AfriNIC in collaboration with other concerned international efforts.

E-mail: gajayi@yahoo.com, gajayi@oauife.edu.ng

The Digital Opportunity Task Force (DOT FORCE)

- The DOT Force was created by the G8 Heads of State at their Kyushv Okinawa Summit in July 2000;
- This initiative brought together 42 teams from govts, the private sector, non-profit organisations in a cooperative effort to identify ways in which the digital revolution can benefit poor Africa countries;
- Some of the action plans of the DOT Force include:
  - Helping to establish and Support Developing Countries and emerging economies in their National e-strategies;
  - Improving Connectivity, Access and Lower Costs;
  - Enhance Human Capacity Development, knowledge Creation and Sharing;
  - Foster Enterprise and Entrepreneurship for Sustainable Economic Development;
  - Promote ICT for healthcare and support against HIV/AIDS and other infectious and communicable diseases.

ACACIA Initiative

- Acacia Initiative is an international effort to empower sub-saharan African communities with the ability to apply ICTs to their social and economic development;
- Major Objectives
  - To demonstrate how ICTs can enable communities to solve their development problems;
  - To build a knowledge base capable of identifying the policies, technologies, approaches and methodologies instrumental in promoting the affordable and effective use of ICTs by marginalized communities;
- Acacia identifies technologies, which are financially sustainable at community level and efficient in responding to needs.
- Acacia's integrated national strategies, and the design of its sub-regional and regional programmes are governed by the fact that community level sustainability depends on factors such large policy environment, the human talent available and infrastructure.

E-mail: gajayi@yahoo.com, gajayi@oauife.edu.ng

African Virtual University (AVU)

- AVU is an interactive – instructional telecommunications network established to give the countries of the sub-saharan Africa direct access to some of the highest quality academic faculty and learning resources throughout the world over.
- AVU is a $1.2m project using satellite technology to deliver distant education with telephone callback for voice intervention from students
- Presently, universities in Kenya, Ghana, Tanzania,Uganda,and Zimbabwe are already connected with some French speaking countries following subsequently.

ICTP TRAINING AND SYSTEM DEVELOPMENT ON NETWORKING & RADIOCOMMUNICATIONS

- REMOVE ISOLATION OF SCIENTISTS ON RETURN TO HOME COUNTRY
- ESTABLISH SMALL AREA COMPUTER NETWORKS AND THEIR CONNECTION TO THE INTERNET-DIRECTLY OR THROUGH NATIONAL NETWORKS
- PRIORITIES ENVISAGED ARE
  - capacity building for technical personnel
  - training of users in the academic or scientific institution involved.

RECENT OCCURENCES
GSM IN AFRICA

- The Recent "GSM in Africa" conference in Johannesburg noted that the mobile phone sector has recorded a growth rate of 100%;
- This is double the already rapid increase worldwide;
- Africa currently has a total of 5.4 million mobiles in operation with more than 70% of this going to South Africa;
- 11 million South Africans are expected to have mobile phones within the next 3 years;
- Others African countries are not left behind in this trend
  - Nigeria with less than 6 months after the take-off of the GSM has recorded more than 350,000 mobile subscribers almost nearing the 450,000 figure for operational fixed lines.

E-mail: gajayi@yahoo.com, gajayi@oauife.edu.ng

GSM contd

- But this has not been the case in countries like Zimbabwe where only national operators are allowed to drive the sector;
- Countries should open up to international telecoms companies.
- Most African politicians are aware that modern telecommunications are the precondition for international companies investing in their countries.
- The GSM trend has shown that once competition and technical advances have forced the cost of handset and usage down sufficiently, the fixed line operators may end up loosing most of their end-users customer services to the mobile operators.

Proven ICT Benefits For Development
(United Nations: April 2000)

ICT has been extremely beneficial to those nations that have used it with determination and enthusiasm

e.g. Malaysia, Singapore, India, Costa Rica, and Brazil

The positive impacts demonstrated by IT in these countries.

- Increased wealth through export of software, Hardware and IT expertise.
- Provide rural communities with convenient online access to full range of Government services
- Computerized Voting Systems has removed the possibility of fraud in elections bring about political and economic stability.
- Promotes transparency in public sector administration
- Improves the delivery of health care services through the application of tele-medicine.
- IT is a good Vehicle for employment generation.
- IT carves out market niches for isolated communities.

Conclusion

Development in ICTs will eventually be the solution to underdevelopment, unemployment and higher earning for many in Africa

For many African countries, a quick-fix solution to telecommunication deficiencies is as important as structural overhaul.