EMPLOYING COMMUNICATION TECHNOLOGIES TO MEET DEVELOPMENT CHALLENGES IN LIBERIA

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Sub topic:
Improving Information and Communication Technology Education to meet Goal 8, Target 18 of the Millennium Goals

"The core challenge lies in financing and implementing the interventions at scale"

Investing in Development – A Practical Plan to Achieve the Millennium Development Goals, Millennium Project Report to the UN Secretary-General.

Outline

- **It's Fair To Say**
- **Millennium Goals**
- *Tackling the Digital Divide*
- *Role of Government and International Partners*
- *Recommendations*
  - K-12
  - College and Universities

It's Fair To Say

➢ A strong and **efficient *communication infrastructure*** has far reaching implications for all countries.

➢ Communication infrastructure includes all mechanisms for transporting people, goods, and services.
- roads, airports, railways, sea ports, information communication technologies (ICT), etc.

➢ An overview of "developed nations" suggests that one of many common characteristic attributed to their successes is a decent communication infrastructure.

Millennium Goals

Goal 1: Eradicate Extreme Hunger and Poverty

Goal 2: Achieve Universal Primary Education

Goal 3: Promote Gender Equality and Empower Women

Goal 4: Reduce Child Mortality

Goal 5: Improve Maternal Health

Goal 6: Combat HIV/AIDS, Malaria and other diseases

Goal 7: Ensure Environmental Sustainability

Goal 8: Develop a Global Partnership for Development

Target 18. In cooperation with the private sector, make available the benefits of new technologies, especially information and communications technologies

Indicators

47. Telephone lines and cellular subscribers per 100 population (ITU)

48. Personal computers in use per 100 population and Internet users per 100 population (ITU)

Information and Communication Technology (ICT)

ICT is any technology that enables communication and the electronic capture, processing, and transmission of information, Radio, television, and print media.

World Bank:

       Assistance for equipment and facilities
       Education management and information systems
       Teacher training and support
       Capacity building
       Educational content
       Distance learning
       Literacy
       Education policy
       Media outreach

Digital Divide

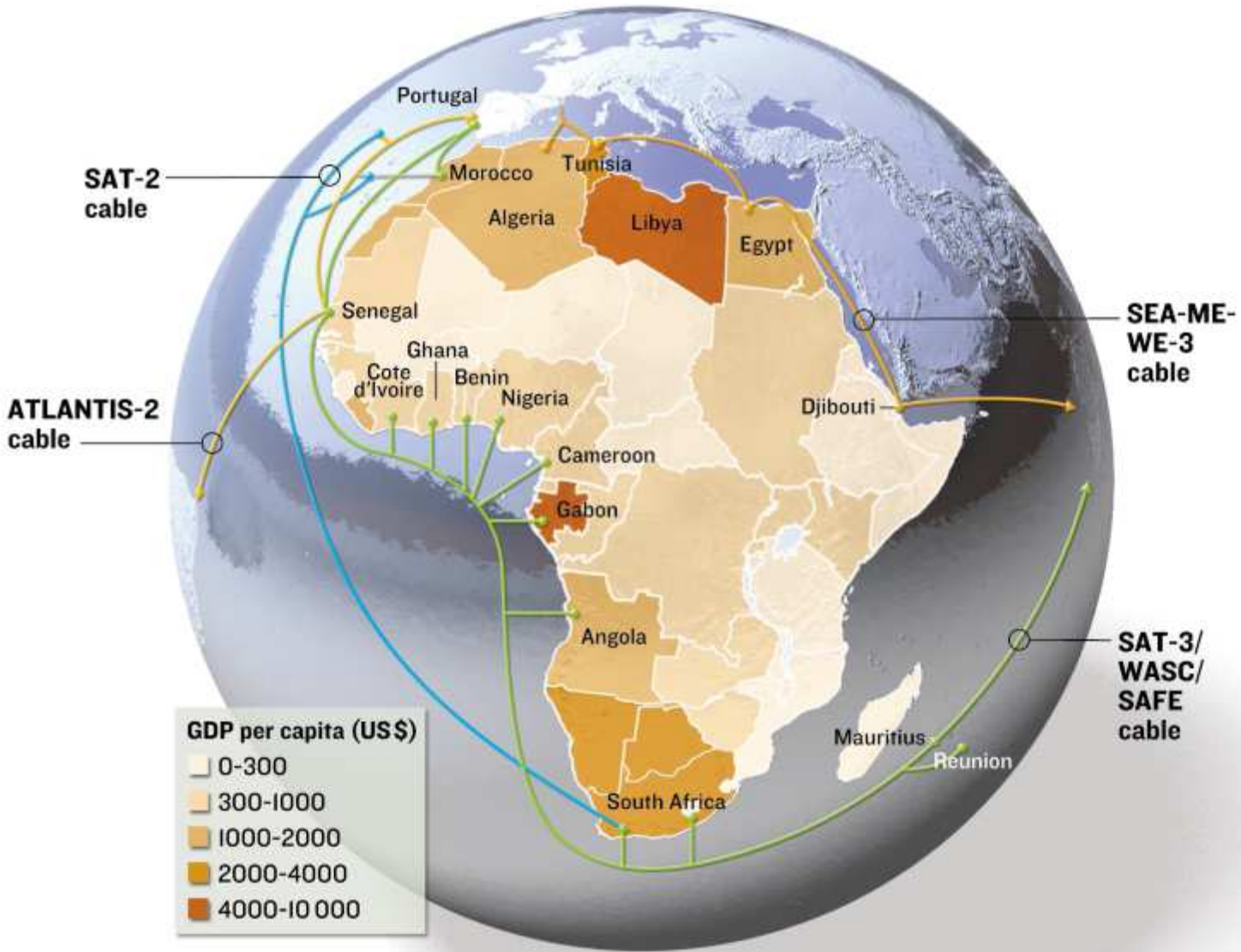Commonly refers to the gap between those with access to ICT and those without

Contributing Factors:

- Lack of appropriate products
- Cost
- Lack of education and training
- Language
- Human resources
- Lack of robust regulatory framework

48 IEEE Spectrum | February 2004 | NA
+TECH EXPEDITIONS
SURF AFRICA

AFRICA LIT A SHINY NEW FIBER-OPTIC
UNDERSEA CABLE ALMOST TWO
YEARS AGO—SO WHY ARE SO FEW
AFRICANS USING IT?

0.2%OF THE WORLD'S INTERNET
TRAFFIC COMES

SAT-2 cable

ATLANTIS-2 cable

SEA-ME-WE-3 cable

SAT-3/WASC/SAFE cable

Portugal
Morocco
Tunisia
Algeria
Libya
Egypt
Senegal
Ghana
Cote d'Ivoire
Benin
Nigeria
Cameroon
Gabon
Djibouti
Angola
Mauritius
Reunion
South Africa

GDP per capita (US$)
☐ 0-300
☐ 300-1000
☐ 1000-2000
☐ 2000-4000
☐ 4000-10 000

Role of Government

➢ Cutting taxes on devices

➢ Liberalizing markets

➢ Should not set over ambitious targets

➢ Improve access to ICT by providing access to education

➢ Define ICT in the context of culture

ICT Policies of 2 Countries

➢ Ethiopia – 40% import tarrifs on ICT equipment makes it too costly for all but the elite;

Incumbent public telecom operator has a monopoly over all telecom services

➢ China – Government views the ICT industry as an engine for economic growth – internet subscribers grew from 33 million in 2001 to 94 million in 2004

International Community Role

➢ The Millennium Development Goals (MDGs) agreed at the UN Millennium Summit in 2000 aims to reduce world poverty and improves lives by 2015

➢ ICT will contribute to achieving these goals by making ICT available to all.

Significant Steps

➢ The call by Her Excellency, Dr. Ellen Johnson Sirleaf, President of the Republic of Liberia to an *E-Liberia: Vision 2010 Conference on Information and Communication Technologies*

➢ Successful Countries that are using information and communication technology to drive their economies have several things in common.
- They have developed policies and enacted laws to create a fair and transparent environment for investment
- provide incentives to keep products and services affordable to the general population,
- develop sustainable and reliable power supply systems
- build reliable physical infrastructure,
- and developed human capital through education and training.

Significant Steps

➢ Beginning now, what additional steps can be taken to reach these targets?

➢ We know there must be knowledgeable persons within the general consumer population who

- understand the application and impact of using available technology.
- Have the capacity to predict with relative certainty the trends, impact, and risks associated with the technologies and their uses.
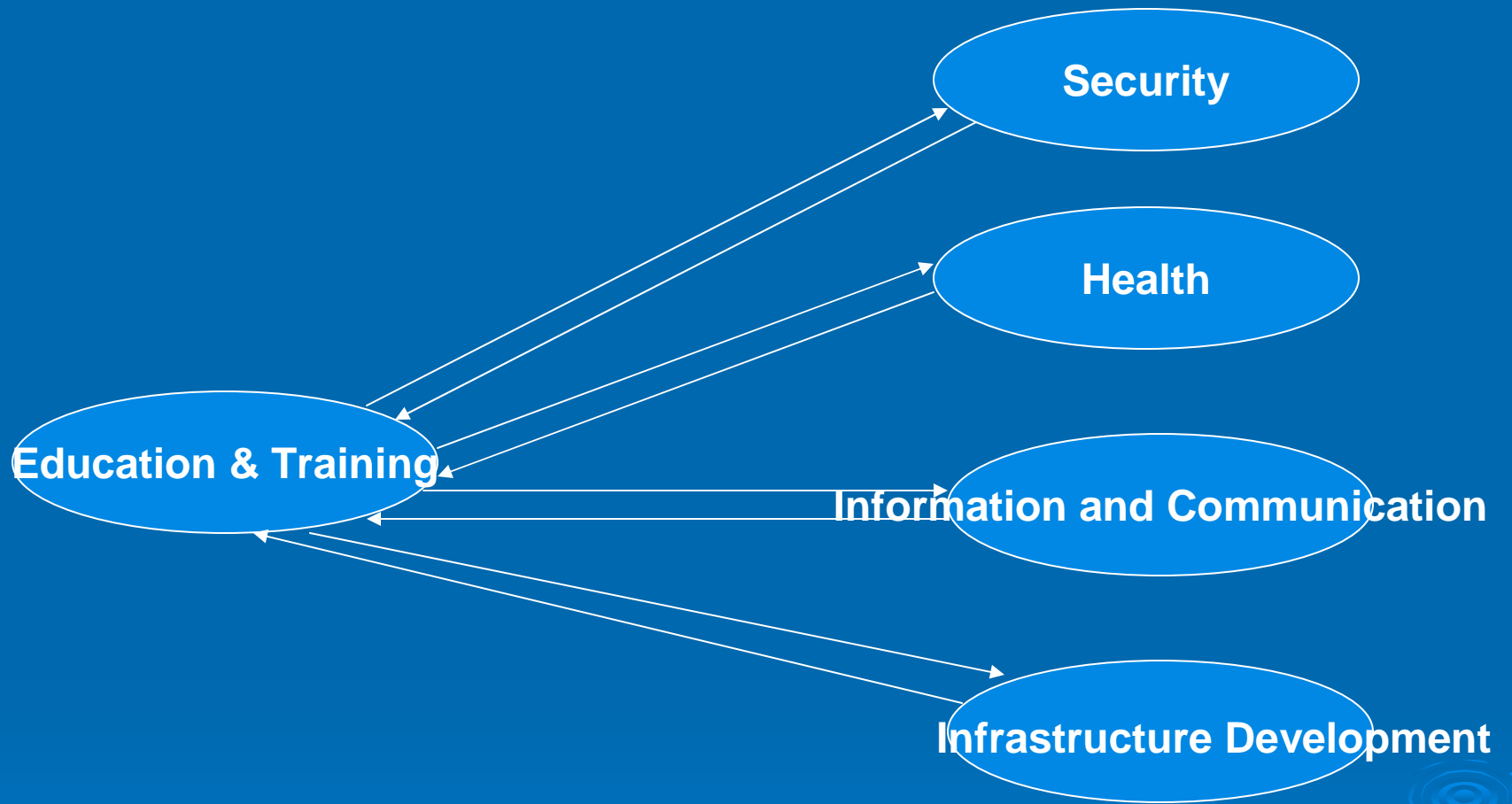
April 2007 ICT Conference in Monrovia

Veep opens West Africa ICT Road Map conference in Accra
By Ghana News Agency Technology , July 9, 2008

"West Africa ICT Road Map to Opportunities," which attracted participants from West Africa and other global partners would examine the application of ICT in the areas of e-commerce and e-Government within the Sub-Region.
Government, US Trade and Development Agency (USTDA) and the US Department of State, organised the conference, which was opened by Vice President Alhaji Aliu Mahama.

Vice President Mahama observed that the realisation of the Millennium Development Goals (MDG's), in West Africa, would be a mirage if ICT do not play an integral part.

"In fact, we are still confronted with the phenomenon of passing our telephone and Internet traffic through the developed countries of Europe and America to the West African Sub-Region."

Ms. Leocadia Zak, Deputy Director of USTDA said her outfit had committed 745,000 dollars in support of ICT projects in Liberia and Niger.

The first grant will fund an assessment for the Liberian Telecommunications Corporation for the technical and financial viability of the proposed metropolitan fibre optic ring around Liberia.

TELECOMMUNICATIONS & ICT FORUM
Hon. Zotawon D.Titus, Assistant Minister for Telecommunications
Hon. Nathaniel E. Kevin, Commissioner, Liberia Telecommunications
Authority
November 26, 2008
POLICY VISION

1. **Reduce & Eradicate Poverty**
2. **Accelerate Economic Growth**
3. **Sustain Socio-Economic Development**
4. **Develop Human Capacity**
5. **Improve Quality of Life**
6. **Promote Infrastructure Development**
7. **Reduce the "Digital Divide"**
8. **Create a Knowledge-Based Society**
9. **Realize Global Objectives**

Government of Liberia recently published Telecommunication Policies

Liberia's ICT Strategies

• National ICT Governing Board
• ICT Secretariat
• E-Government
• E-Commerce
• E-Health
• E-Agriculture
• E-Education
• E-Security
• Gender and Youth

# How to attract the best into IT

➢ **Develop proper IT leadership in the rush to improve skills**

➢ **Develop a range of career paths for IT staff, offering different routes for growth, depending on personal preferences**

➢ **Promote and develop cross-functional skills covering the need for a range of skills in IT staff**

➢ **Show people that IT can be exciting and relevant**
  - **people considering a career in IT are often unaware of the range of interesting challenges they could work with**

➢ **Mix computer science with other disciplines at university**
  - **computer science courses should be mixed with other disciplines, such as business or life sciences, to give graduates a more rounded and relevant education**

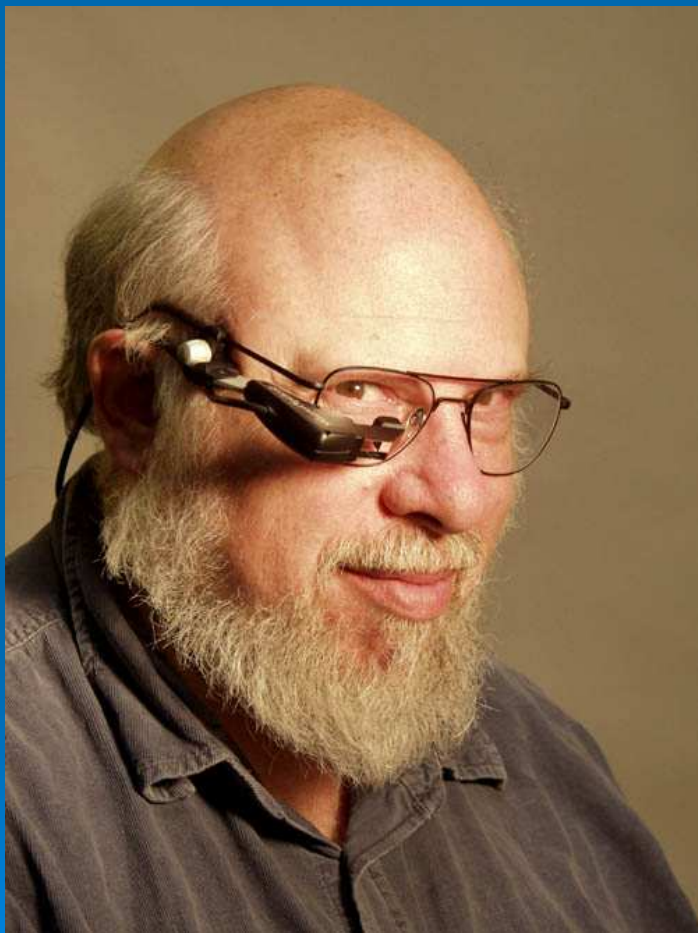➢ **Encourage more people to pursue degrees, rather than just basic IT courses.**

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Wearable Computers

➤ Not this!

The Wearable PC
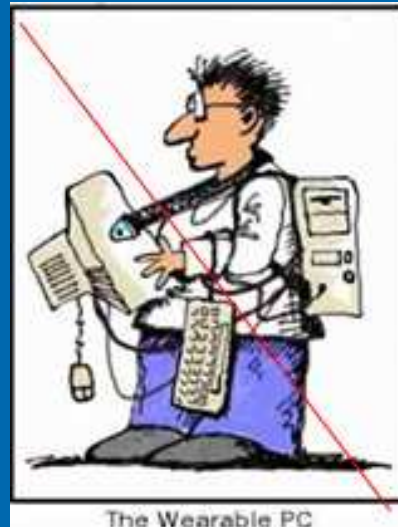
➤ Computing power that one can wear with ease
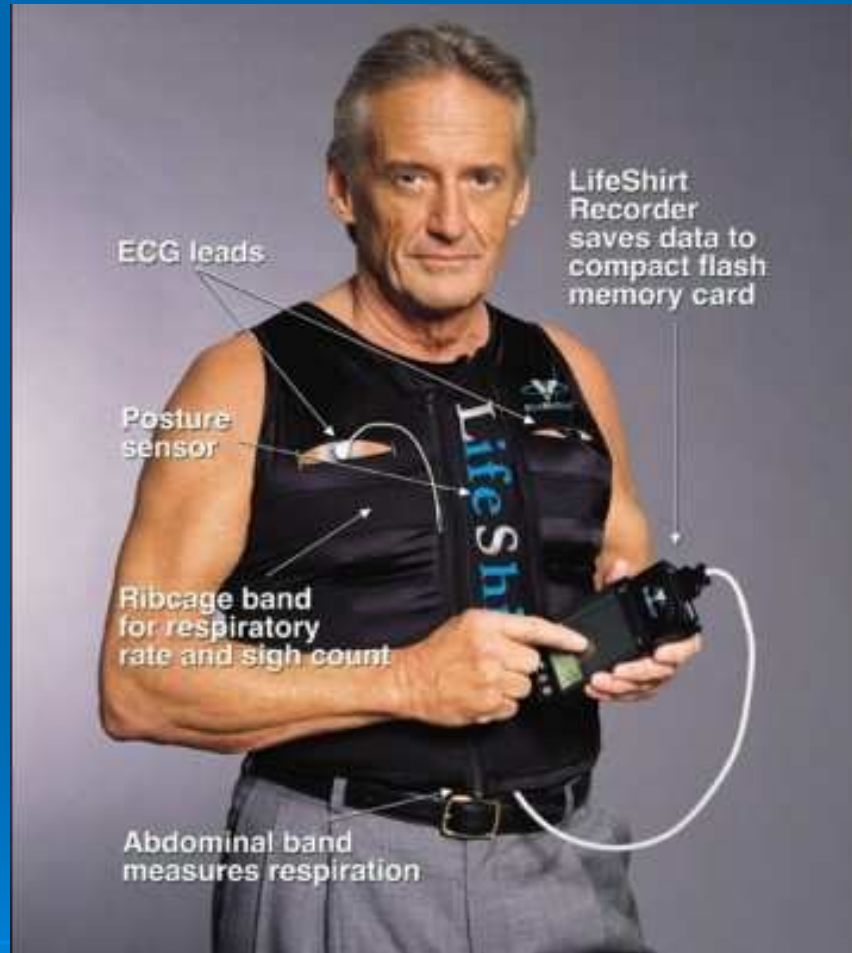➤ Head mounts, glasses
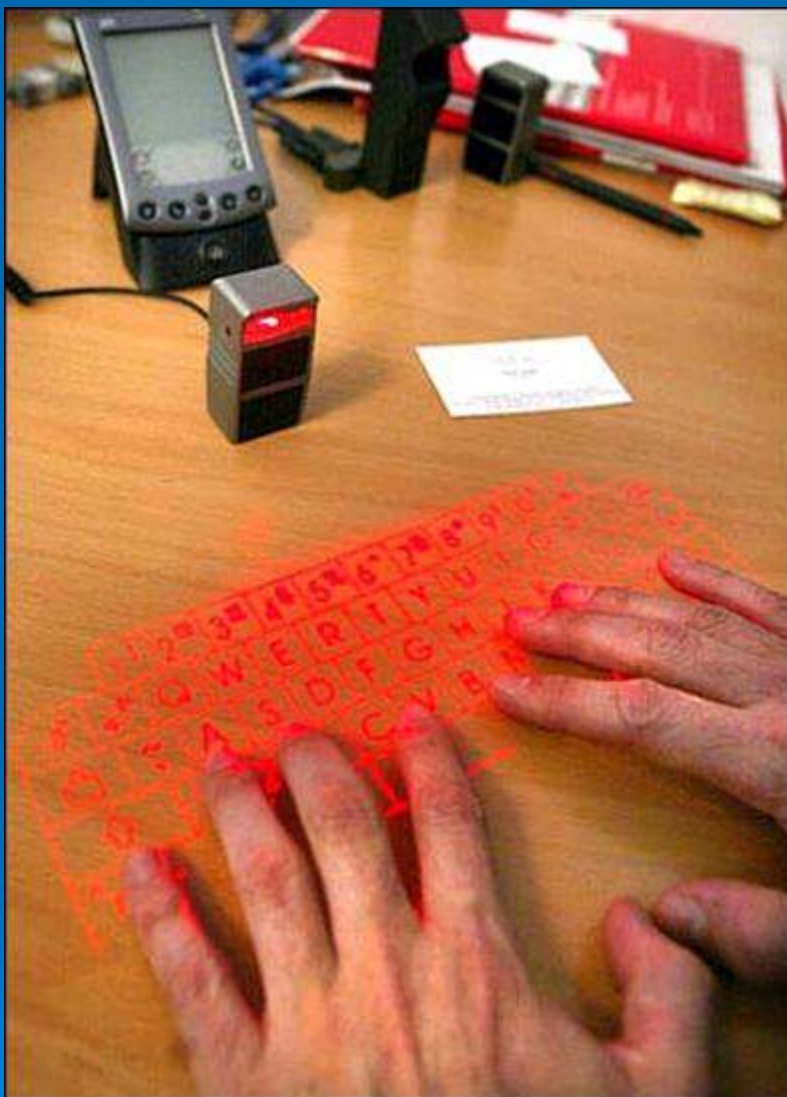➤ Gloves
➤ Shirts/jackets
➤ Wrist band

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Wrist Computing

Glasses with Display

Jackets

ECG leads

LifeShirt Recorder saves data to compact flash memory card

Posture sensor

Ribcage band for respiratory rate and sigh count

Abdominal band measures respiration
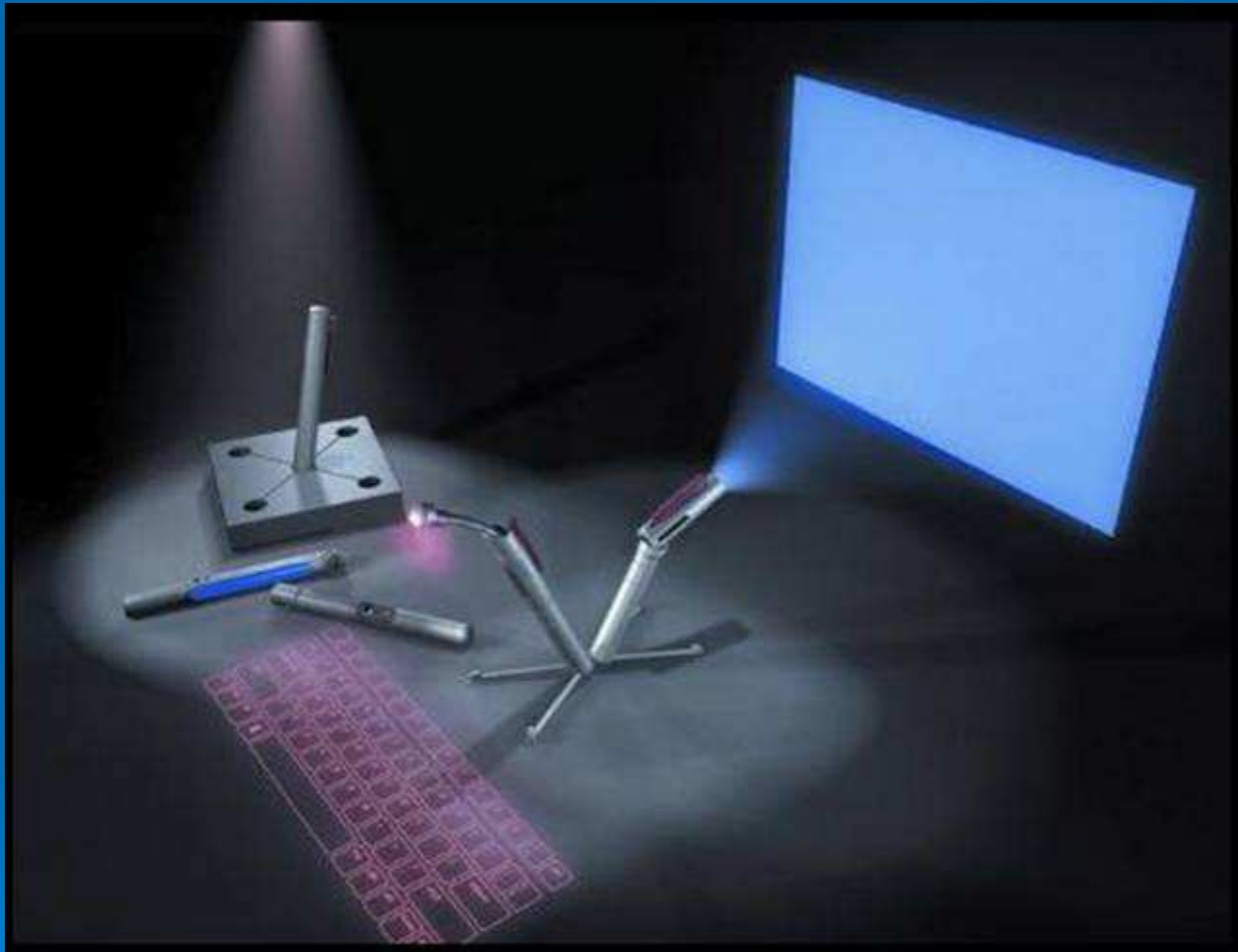
Recommendations

➢ Need a Paradigm Shift
  - Develop appropriate curricular for K-12 to incorporate ICT as a tool

    Model Curriculum

  - Develop appropriate curricular for Colleges and Universities

    Model Curriculum

  - Create Magnet clusters to take advantage of the power for network computing

  - Promote ICT Literacy through Public Service commentaries, Radio, TV using local languages

  - Share the devices and information

Recommendations
One Lap Top per child Project

➤ Developed my One Laptop Per Child (OLPC) organization at MIT

➤ Laptop is open source

➤ Uses a crank to generate electricity

➤ Advocates:

 ● make learning process more engaging

 ● Critics: exploit mass market under the guise of non-profitability, question as to whether cost of teaching materials, training teachers, and maintenance have been addressed.

Recommendations

- Train the trainers in the context of culture

- Empower males and females to participate in bridging the digital divide

- Be Proactive - Use your international citizens

- Create a focus on Science and ICT by establishing a governmental unit of Science and Technology

- Fully implement the Telecommunication Policies

How and what Liberians advocate for to ensure that they have the appropriate infrastructure to meet these challenges can have a lasting effect on the pace at which development will occur.

Thanks!!!