Digital Bangladesh: Target & Present Scenario

Syed Ziaul Huque
Director
Ahsania Institute of Technology & Business
Dhaka Ahsania Mission
DIGITAL BANGLADESH

- Bangladesh Awami League manifesto launched on 12 December 2008
- Vision 2021 includes a number of milestones relating to ICT
- The entire nation, particularly the young generation imparted whole hearted support for Digital Bangladesh
Vision 2021: Digital Bangladesh

...by 2021, Bangladesh will reach a trajectory of high-performing growth supported by advanced and innovative technology with prices of commodities stabilized, income and human poverty brought to a minimum level, health and education for all secured and capacity building combined with creativity enhanced, social justice established, social disparity reduced, participatory democracy firmly rooted and capacity to tackle the adverse effects of climate change achieved.

Information and communication technology will, by that time, take us to new heights of excellence giving the country a new identity to be branded as Digital Bangladesh.
ICT Policy Development

- June 1997: Committee appointed by the Government Export of Software and Data Processing Services from Bangladesh
- September 1997: Committee submits report
  - 45 Recommendations
- January 1998: Recommendations accepted by Government
  - around 40% implemented
- January 2002: Revised Recommendations submitted to Government
- 2001: IT Policy Drafted
- October, 2002: ICT Policy adopted
- September, 2008: Revised ICT Policy Drafted
- March, 2009: ICT Policy 2009 approved
ICT Policy 2009

- Vision
- Objectives (10)
- Strategic themes (56)
- Action Items (306)

- This policy aims at building an ICT-driven nation comprising of knowledge-based society by the year 2006. In view of this, a country-wide ICT-Infrastructure will be developed to ensure access to information by every citizen to facilitate empowerment of people and enhance democratic values and norms for sustainable economic development by using the infrastructure for human resources development, governance, e-commerce, banking, public utility services and all sorts of on-line ICT-enabled services.
ICT Policy Vision

- Expand and diversify the use of ICTs to
  - establish a transparent, responsive and accountable government;
  - Develop skilled human resources;
  - Enhance social equity;
  - Ensure cost-effective delivery of citizen-services through public-private partnerships; and
  - Support the national goal of becoming a middle-income country within ten years and join the ranks of the developed countries of the world within thirty years.
10 Objectives in ICT Policy

1. Social Equity
2. Productivity
3. Integrity
4. Education and Research
5. Employment Generation
6. Strengthening Exports
7. Healthcare
8. Universal Access
9. Environment, Climate and Disaster Management
10. Supports to ICTs
E-Government / Governance

- E-government is ICT driven public and development administrative system which means delivery of government services and information to people using ICT means.
- E-governance is the system to obtain government services through electronic means, enabling access to government information and completion of government transaction on an anywhere–any time basis.
E-Government / E-Governance

- E-Government refers to the use of ICT to provide and improve government services, transactions and interactions with citizens, businesses, and other arms of government.

- E-Government is defined as ‘The utilization of the internet and the world-wide-web for delivering government information and services to the citizens. (United Nations, 2006)
Objectives of E-Governance

The objective of establishing e-governance is not just to computerize all the activities. It is to transform gradually the way the government operates. E=governance will transform the government

<table>
<thead>
<tr>
<th>From</th>
<th>To</th>
</tr>
</thead>
<tbody>
<tr>
<td>Entitlement</td>
<td>Outcomes</td>
</tr>
<tr>
<td>Regulator</td>
<td>Facilitator</td>
</tr>
<tr>
<td>Agency Focused</td>
<td>Citizen Focused</td>
</tr>
<tr>
<td>Protective</td>
<td>Collaborative</td>
</tr>
<tr>
<td>Administrative</td>
<td>Value Provider</td>
</tr>
<tr>
<td>Rule based</td>
<td>Knowledge based</td>
</tr>
<tr>
<td>Silos</td>
<td>Integrated</td>
</tr>
</tbody>
</table>
SMART Government

A government adopting electronic governance is a SMART government:

S — Simple
M — Moral
A — Accountable
R — Responsive
T — Transparent
Delivery Models

The primary delivery models of e-Government can be divided into:

- Government-to-Citizen or Government-to-Customer (G2C)
- Government-to-Business (G2B)
- Government-to-Government (G2G)
- Government-to-Employees (G2E)
Government Service delivery through ICT

Things to do:

- ICT Capacity Development
- Physical Infrastructure Development
- Legal Infrastructure Development
- ICT access opportunity for the citizen
- Development of ICT Personnel
- Development of ICT Industry
Mobile Phone Subscribers in Bangladesh

The total number of Mobile Phone Active Subscribers has reached 74.188 million at the end of April 2011. The Mobile Phone subscribers are shown below:

<table>
<thead>
<tr>
<th>Operators</th>
<th>Actives Subscribers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grameen Phone Ltd. (GP)</td>
<td>32.640</td>
</tr>
<tr>
<td>Orascom Telecom Bangladesh Ltd. (Banglalink)</td>
<td>20.049</td>
</tr>
<tr>
<td>Robi Axiata Limited (Robi)</td>
<td>13.794</td>
</tr>
<tr>
<td>Airtel Bangladesh Ltd. (Airtel)</td>
<td>4.782</td>
</tr>
<tr>
<td>Pacific Bangladesh Telecom Ltd. (Citycell)</td>
<td>1.747</td>
</tr>
<tr>
<td>Teletalk Bangladesh Ltd. (Teletalk)</td>
<td>1.174</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>74.188</strong></td>
</tr>
</tbody>
</table>
Internet Service Providers

- **1st ISP**: June 1996
- **1999**: 10 ISPs
  - 8 in Dhaka and 2 in Chittagong
- **2007**: 203 ISPs
  - 77 are nationwide ISPs.
  - service in 18 districts in Bangladesh
- **2009**: Grameen Phone: 4.5 million subscribers using EDGE technology
- **WiMax**: June 2009
<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Africa</td>
<td>1,013,779,050</td>
<td>4,514,400</td>
<td>110,931,700</td>
<td>10.9 %</td>
<td>2,357.3 %</td>
<td>5.6 %</td>
</tr>
<tr>
<td>Asia</td>
<td>3,834,792,852</td>
<td>114,304,000</td>
<td>825,094,396</td>
<td>21.5 %</td>
<td>621.8 %</td>
<td>42.0 %</td>
</tr>
<tr>
<td>Europe</td>
<td>813,319,511</td>
<td>105,096,093</td>
<td>475,069,448</td>
<td>58.4 %</td>
<td>352.0 %</td>
<td>24.2 %</td>
</tr>
<tr>
<td>Middle East</td>
<td>212,336,924</td>
<td>3,284,800</td>
<td>63,240,946</td>
<td>29.8 %</td>
<td>1,825.3 %</td>
<td>3.2 %</td>
</tr>
<tr>
<td>North America</td>
<td>344,124,450</td>
<td>108,096,800</td>
<td>266,224,500</td>
<td>77.4 %</td>
<td>146.3 %</td>
<td>13.5 %</td>
</tr>
<tr>
<td>Latin America/Caribbean</td>
<td>592,556,972</td>
<td>18,068,919</td>
<td>204,689,836</td>
<td>34.5 %</td>
<td>1,032.8 %</td>
<td>10.4 %</td>
</tr>
<tr>
<td>Oceania / Australia</td>
<td>34,700,201</td>
<td>7,620,480</td>
<td>21,263,990</td>
<td>61.3 %</td>
<td>179.0 %</td>
<td>1.1 %</td>
</tr>
<tr>
<td><strong>WORLD TOTAL</strong></td>
<td><strong>6,845,609,960</strong></td>
<td><strong>360,985,492</strong></td>
<td><strong>1,966,514,816</strong></td>
<td><strong>28.7 %</strong></td>
<td><strong>444.8 %</strong></td>
<td><strong>100.0 %</strong></td>
</tr>
</tbody>
</table>

**NOTES:** Internet Usage and World Population Statistics are for June 30, 2010.
<table>
<thead>
<tr>
<th>Sl. #</th>
<th>Country</th>
<th>Users (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>South Korea</td>
<td>81.1%</td>
</tr>
<tr>
<td>2.</td>
<td>Brunei Darussalam</td>
<td>80.7%</td>
</tr>
<tr>
<td>3.</td>
<td>Japan</td>
<td>78.2%</td>
</tr>
<tr>
<td>4.</td>
<td>Singapore</td>
<td>77.8%</td>
</tr>
<tr>
<td>5.</td>
<td>Taiwan</td>
<td>70.1%</td>
</tr>
<tr>
<td>6.</td>
<td>Hong Kong</td>
<td>68.8%</td>
</tr>
<tr>
<td>7.</td>
<td>Malaysia</td>
<td>64.6%</td>
</tr>
<tr>
<td>8.</td>
<td>Macao</td>
<td>49.5%</td>
</tr>
<tr>
<td>9.</td>
<td>Azerbaijan</td>
<td>44.4%</td>
</tr>
<tr>
<td>10.</td>
<td>Kyrgyzstan</td>
<td>39.8%</td>
</tr>
<tr>
<td>11.</td>
<td>Kazakhstan</td>
<td>34.3%</td>
</tr>
<tr>
<td>12.</td>
<td>Kazakhstan</td>
<td>34.3%</td>
</tr>
</tbody>
</table>
## Internet Usage in Asia

<table>
<thead>
<tr>
<th>Sl. #</th>
<th>Country</th>
<th>Users (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>13.</td>
<td>China</td>
<td>31.6%</td>
</tr>
<tr>
<td>14.</td>
<td>Philippines</td>
<td>29.7%</td>
</tr>
<tr>
<td>15.</td>
<td>Georgia</td>
<td>28.3%</td>
</tr>
<tr>
<td>16.</td>
<td>Vietnam</td>
<td>27.1%</td>
</tr>
<tr>
<td>17.</td>
<td>Thailand</td>
<td>26.3%</td>
</tr>
<tr>
<td>18.</td>
<td>Maldives</td>
<td>22.2%</td>
</tr>
<tr>
<td>19.</td>
<td>Uzbekistan</td>
<td>16.8%</td>
</tr>
<tr>
<td>20.</td>
<td>Indonesia</td>
<td>12.3%</td>
</tr>
<tr>
<td>21.</td>
<td>Mongolia</td>
<td>11.3%</td>
</tr>
<tr>
<td>22.</td>
<td>Pakistan</td>
<td>10.4%</td>
</tr>
<tr>
<td>23.</td>
<td>Tajikistan</td>
<td>9.3%</td>
</tr>
</tbody>
</table>
## Internet Usage in Asia

<table>
<thead>
<tr>
<th>Sl. #</th>
<th>Country</th>
<th>Users (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>24.</td>
<td>Sri Lanka</td>
<td>8.3%</td>
</tr>
<tr>
<td>25.</td>
<td>Laos</td>
<td>7.5%</td>
</tr>
<tr>
<td>26.</td>
<td>Bhutan</td>
<td>7.1%</td>
</tr>
<tr>
<td>27.</td>
<td>Armenia</td>
<td>7.0%</td>
</tr>
<tr>
<td>28.</td>
<td>India</td>
<td>6.9%</td>
</tr>
<tr>
<td>29.</td>
<td>Afghanistan</td>
<td>3.4%</td>
</tr>
<tr>
<td>30.</td>
<td>Nepal</td>
<td>2.2%</td>
</tr>
<tr>
<td>31.</td>
<td>Turkmenistan</td>
<td>1.6%</td>
</tr>
<tr>
<td>32.</td>
<td>Cambodia</td>
<td>0.5%</td>
</tr>
<tr>
<td>33.</td>
<td>Bangladesh</td>
<td>0.4%</td>
</tr>
<tr>
<td>34.</td>
<td>Timor-Leste</td>
<td>0.2%</td>
</tr>
</tbody>
</table>
## Cost of Access

Monthly cost for 256 kbs data link in different countries (ISP to End user)

<table>
<thead>
<tr>
<th>Country</th>
<th>Monthly Rent (256 Kbps dedicated line) in USD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bangladesh</td>
<td>430</td>
</tr>
<tr>
<td>India</td>
<td>195</td>
</tr>
<tr>
<td>Pakistan</td>
<td>200</td>
</tr>
<tr>
<td>Philippines</td>
<td>160</td>
</tr>
<tr>
<td>USA</td>
<td>15</td>
</tr>
</tbody>
</table>
Submarine Cable

- 27 March 2004
  SEA-ME-WE 4 Consortium
  1.28 Tbps (Tb \Rightarrow 10^{12})
  10 Gbps (Gb \Rightarrow 10^9)
- Length 22,000 k.m. extending from Singapore to Marseilles of France
- High Capacity Cable using DWDM Technology
Consortium Countries

Singapore, Malaysia, Thailand, Bangladesh, India (Bharti), India (VSNL), Srilanka, UAE, Pakistan, Saudi Arabia, Egypt, Italy, Tunisia, Algeria, France (French Telecom), France (MCIF).
Fig. SEA-ME-WE-4 Consortium’s Submarine Cable System
Submarine Cable Route

The total route of the submarine cable is divided into four major segments:

**Segment 1**: Singapore to Mumbai

**Segment 2**: Mumbai to Suez

**Segment 3**: Land Fiber optic cable between Suez and Alexandria via Cairo

**Segment 4**: Alexandria to Marseilles

Major Part by ⇒ M/S Alkatel Submarine Network of France

Small Part by ⇒ M/S Fujitsu, Japan
Utilization of Bandwidth
Optical Fiber Networks (Existing)

14,776 KM
Optical Fibers
Network
Connecting
59 Districts
296 Upazilas
Progress: Policy and Legal

- National Telecommunication Policy 1998
- Bangladesh Telecommunication Act 2001
- International Long Distance Telecommunication Services Policy 2007
- National Information and Communication Technology (ICT) Policy 2009
- National Broadband Policy 2009
- The Right to Information Act 2009
- Bangladesh Telecommunication Regulatory Act (Amendment) 2009
- International Long Distance Telecommunication Services Policy 2010
- Bangladesh Hi-Tech Park Authority Act 2010
- Voter ID Platform as e-service delivery Platform
Broadband Policy

To achieve vision 1021, “Digital Bangladesh”, the government plans to extend the broadband internet and telecom facilities for the benefits of the rural people to reduce the gap of digital divide.

1. The broadband penetration rate will be increased for 7% (2011) to 30% within 2015
2. All the union councils will be needed to be brought under broadband network
3. About 1.75 million educational institutions will be provided with broadband connection by 2013
## Budget Allocation

<table>
<thead>
<tr>
<th>FY</th>
<th>Taka (Million)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2009–1010</td>
<td>1,000</td>
</tr>
<tr>
<td>2010–2011</td>
<td>1,120</td>
</tr>
</tbody>
</table>
Digital Bangladesh Task Force handed by Hon’ble PM
22 other Members: Finance Minister, Minister for Planning, Minister of MOPT, Minister of Commerce, State Minister of MOSICT, 5 Secretary, ICT Experts from Govt./Autonomous Body and Universities / Private Sector

Policy Implantation Member / Leadership
• Key Cabinet Members
• Secretary of Ministries
• 50+ e-Governance Focal Points
• 64 DC’s and 483 UNO’s
• ICT Leaders
E-Government: Existing Scenario

- Government forms site: www.forms.gov.bd
- Registration of Companies and Societies: www.roc.gov.bd
- Laws of Bangladesh: www.bdlaws.gov.bd
- Passports: www.dip.gov.bd
- Procurement: www.cptu.gov.bd
- Electoral Roll Database: http://123.49.39.5/voterlist/
- Chittagong Customs House: http://nbr-ctg.com/cchahomebeta/
Achievement: Connecting Citizens and Government

Community Information Centers

- 3,000 by NGOs/Private Sector.
- 4501 Union-based Information Centers by Government of Bangladesh.
- 147 Upazila-based Information Centers by Government of Bangladesh.
Achievement: Connecting Citizens and Government

- Community Radio
- All 64 DC Offices, PMO and Cabinet being connected with video conferencing
- Inter-networking between Ministries and all Government bodies across the country through BanglaGovNet
- Massive content development initiatives
- Establishment of National Data Centre in Bangladesh Computer Council (BCC)
Achievement: Industry Sector

- Hardware affordable to middle class
- 500 software and ITES companies employing 25,000 people
- Exporting $35M (steady 20-25% yearly increase) to 30 countries
- ITES sub-sectors identified as growth areas
- Access to Finance: EEF Fund, Venture Capital, and so on.
- Establishment of National Payment gateway (Central Bank)
Achievement: Infrastructure

• Cyber Centres in Universities and other academic institutions
• Computer labs in 1610 academic institutions in 2010’ more in the pipeline in 2011
• ICT Incubates: 48 Companies
• Software Technology Park (STP) in the capital as well as in divisional headquarters
• Hi-Tech Park
• Country-wide Fiber-optic network
• Redundant submarine-cable connectivity
Hi-Tech Park

Government has given top-priority to knowledge-based industry to enter into the information age. High-Tech Park: Kaliakoir, 120 hectar.

Main features:

• Modern infrastructure and administrative support
• Modern facilities and amenities
• Single window government service including speedy customs and port clearances
• Marketing of the services and goods
• Uninterrupted power supply
• Incubation service
• Linkage with educational institutions
• State-of the art technology
Categories of Industries at Hi-Tech Park

(i) Computer Hardware
(ii) Computer Software
(iii) Communications Hardware
(iv) Communications Software
(v) Agro-bio-technology and genetic Engineering
(vi) Automobiles and Metal Industries
(vii) New and advanced materials
(viii) Medical Supplies and Devices
(ix) Pharmaceutical and Clinical Products
(x) Garments and Textile (R&D)
(xi) Plastics
Categories of Industries at Hi-Tech Park

(xii) Merchandising and Machinery
(xiii) Design of Electronic Products
(xiv) Manufacturing and Assembly of Electronic Products
(xv) IT Enabled Services
(xvi) Human Resource Development Institute
(xvii) Design and Consultancy
(xviii) Bioinformatics
Achievement: Human Resources Development

• 5000+ graduates per year in ICT related areas
• ICT introduced in Secondary and higher level curriculum
• ICT introduced in polytechnic & vocational programmes
• National ICT Internship for ICT Graduates
• HRD Initiatives through School/College Labs
  ✓ Teachers Training
  ✓ Training of Government official/staff
  ✓ ICT literacy development for common people
Conclusion

There are some constraints for the development of ICT in Bangladesh which have already been addressed. However, we will have to overcome all these constraints to become an ICT driven nation with ICT excellence to transform our poverty and disaster prone country into Digital Bangladesh, a prosperous Bangladesh, which our Father of the Nation Bangabandhu Sheikh Mujibur Rahman dreamt of.

JOY BANGLA