

ICT4D Status Report 1.0

Submitted by ragibhasan on Sat, 2006-10-28 20:46.

Introduction:

This report is an attempt to monitor ICT development in different sectors and to compile civil society views and understanding of policy intervention in those areas. We consulted different relevant organizations to identify the issues of importance, to have a status check and to map the challenges and opportunities in those areas. The areas that we tried to cover are: localization/open content development, telecentre movement, access/infrastructure, community radio development and e-Governance in the context of Bangladesh. The study is intended to focus on pertinent areas that are relevant to 'ICT for development' community where a large number of civil society organizations are involved.

This is a collaborative document where different chapters are written by different lead organizations that are actively involved in those areas. Thanks to Ananya Raihan & Suporna Roy of D-net (<http://www.dnet-bangladesh.org/>), Hakikur Rahman of SDNP Bangladesh (<http://www.sdnbd.org/>), Munir Hasan & Ragib Hasan of Bangladesh Open Source Network-BDOSN (<http://www.bdosn.org/>) & Bangla WikiPedia(<http://bn.wikipedia.org/>), AHM Bazlur Rahman & Golam Nabi Jewel of BNNRC (<http://www.bnnrc.net/>) and K.A.M Morshed of UNDP Bangladesh (<http://www.un-bd.org/undp/ictd/index.html>) for writing different chapters of this report and initiating a collective discussion on the topics. But it does not mean that others can not contribute. In fact we want exactly the opposite. Therefore we are uploading the document as an open and wiki document which anyone can edit and enrich it further with more information, suggestion and correction. We are seeking your support and feedback directly into the chapters from all of our readers.

Methodologies:

The report was aimed at bringing an update to ICT development situation in Bangladesh and to give an overview as to what civil society can do in terms of making a policy intervention. Therefore the methodology of this report followed a series of communication and information exchange with different organizations, desk research along with interviews and field level data collection. As this is a living document and different chapters are contributed by different lead organizations, our methodology has been to facilitate this process and to let these organizations prepare the basic draft, which then again would be reviewed by other individuals/organizations.

Chapters:

We worked on the following chapters. Please click on the links below to get further details of these chapters.

- [Access and infrastructure issues: context Bangladesh](#)
- [Community Access Points or Telecentre Movement in Bangladesh](#)
- [Community Radio: Ready to Launch in Bangladesh](#)
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- [Localization and Open Content Development in Bangladesh](#)

Access and infrastructure issues: context Bangladesh

Submitted by editors on Thu, 2006-11-16 04:12.

Access and Infrastructure Issues: Context Bangladesh

Basic paper submitted by Hakikur Rahman, SDNP Bangladesh

(** Please Note: For editing, please try not to delete existing write ups, rather add or use rejoinder to put forward your arguments/information/correction at the end of each sentence or paragraph. It is always better to type things directly, otherwise if you are copying and pasting from other sources, please do copy it first to Notepad or any simple text editing software before pasting it here. Copying and pasting directly from Microsoft Word/Open Office may make the text garbled).

Preamble:

Access is the ability to communicate with a system. Technically, it is the process of obtaining data from, or transforming data to a storage device, register or RAM [1]. But, in broad sense, it is the user's ability to gain entry to digital information and ability to obtain information from an information agency. Critically, access depends on the point at which entry is gained into a circuit or a network interconnection, the ability to obtain data from the repository and type of connection between user end and inter-exchange point. With a view of ICT [2], access is measured by the number of estimated Internet users, the adult literacy rate, the cost of a local call and GDP[3] per capita.

Access provider is any organization that arranges for connectivity to the information junction and provides information services to the end users. Specifically, Internet access provider is a service provider, including providers of voice telephony or cable television services, which

provides Internet access on a retail or wholesale basis. Depending on their services, in a country there may be Internet access provider, Network access provider, competitive access provider, alternate access provider or public access provider. While the concept of open access prevails, it allows users to choose their own service provider for telephony, cable television or Internet services with the broadband network merely being the common 'pipe' through which the services are transferred.

This chapter deals with access (rather community access) and infrastructure (information infrastructure) issues of Bangladesh, their current status, role of civil society in promoting wider access of information to the common people and efforts made by the policy makers to achieve the common goal of information access to all.

Current Scenario:

Though Bangladesh's stand at ICT diffusion index by regional groupings does not look good (Bangladesh remains at the bottom in South Asia with rank of 164 in 1997, 171 in 2001 and 171 in 2004[5]), the country actually has progressed a lot in terms of cellular phone penetration. Currently, five cellular phone operators have covered 61 districts out of 64 and over 90% of the population, comprising a subscriber platform of more than 15 millions[6]. BTTB[7], the lone government owned telecom provider has provided PSTN[8] access to 64 districts and to 465 Upazilas; ISP services to all 64 district HQs and 165 Upazilas; and DDN [9] access to 41 districts through its own infrastructure. 1800Km of fiber under Bangladesh Railway is being utilized by the private mobile telephone operators; over 150 ISPs has obtained license from the Bangladesh Telecom Regulatory Commission (of which more than 80% are located at Dhaka and Chittagong); and 468,000 MIU [10] Km of sub-marine cable has been linked to the landing station at Cox's Bazar under SEA-ME-WE4[11] with 64 STM-1[12] (10 Gbps) capacity.

Table-1 shows the basic indicators of ICT; Table-2 shows the figures for main telephone lines in Bangladesh; Table-3 gives the indication of cellular subscribers growth in the country between 2002 and 2005; and Table-4 illustrates the Information technology parameters between 2002 and 2004.

Table 1: Basic ICT Indicators

Year	Population Density (per square KM)	GDP Per Capita (USD)	Total Telephone Subscribers (per 100 inhabitants)
2002	925	346	1.26

2003	938	354	1.56
2004	952	382	2.63
2005	985	382	2.63 (2004)

Table 2: Main Telephone Lines

Year	Main Telephone Lines (000s)	CAGR [13] (%)	Main Telephone Lines (per 100 inhabitants)	CAGR (%)
2002	605.9	10.5 (1997-2002)	0.46	8.9 (1997-2002)
2003	742.0	12.5 (1998-2003)	0.55	10.8 (1998-2003)
2004	831.0	13.9 (1999-2004)	0.61	12.3 (1999-2004)
2005	831.0	14.0 (2000-2005)	0.61	12.4 (2000-2005)

Source: ITU statistics

Table 3: Cellular Subscribers

Year	Cellular mobile subscribers (000s)	CAGR (%)	Per 100 inhabitants	As % of total telephone subscribers
2002	1,075.0	110.5 (1997-2002)	0.81	64.0
2003	1,365.0	78.7 (1998 - 2003)	1.01	64.8
2004	2,781.6	79.6 (1999 - 2004)	2.03	77.0
2005	9,000.0	100.3 (2000 - 2005)	6.35	91.5

Source: ITU statistics

Table 4: Information Technology Parameters

Year	Internet		
	Hosts per 10,000 inhabitants	Users per 100 inhabitants	PCs per 100 inhabitants
2002	--	0.15	0.34
2003	--	0.18	0.78
2004	- (13 hosts)	0.22	1.20

Source: ITU Statistics

Interventions at the national level

Despite huge growth of interregional Internet bandwidth in Asia [14] (6% in 1999 to 35% in 2005), Bangladesh falls under low access criteria with 0.18 point at the Digital Access Index 2002 . Enactment of National Telecommunications Policy in March 1998 and Bangladesh Telecommunications Act in 2001, establishment of Bangladesh Telecommunication Regulatory Commission established in January 2002[15], introduction of National ICT Policy in October 2002 and ICT Act in 2003, and very recent legalization of VoIP, however, are several milestones of the nation that improvise along the access and infrastructure management from a very rudimentary stage.

Role of civil society in promoting access to mass people

Through formation of the high-powered National ICT Task Force with the Honorable Prime Minister as its Chairperson, ICT has been recognized as the thrust sector. But, as years pass by, much of the commitments couldn't reach the grass roots, as they were upheld in WSISs[16] and WSSD [17]. Government agencies like BTTB and Bangladesh Computer Council, including relevant ministries, as such the Ministry of Posts and Telecommunications and the Ministry of Science and ICT are working to prosper access and infrastructure, but not with sufficient momentum. Private entrepreneurs like, ISP Association of Bangladesh and very recently evolved Bangladesh Cable Internet Operators Association are working in unison in many areas of Dhaka metropolis to provide door-to-door Internet access. Civil society in this particular aspect could not do much, in the prevailing situation. In the south Amader Gram, YPSA [18] and SEBA [19], in the north through KATALYST (very recent outreach), in a few places RISOL[20], and in several strategic places SDNBD [21] are working in isolation to promote community Internet access at the grass roots, without any coordination among them [22]. Much has to be discussed to unify these unique and novel efforts for making a national outcome. BNNRC [23] has been acting for several years in advocating for information right.

Things to be done

Much to be done to upgrade the access index from 0.336, connectivity index from 0.010 and ICT diffusion index from 0.173, where Bangladesh stands at 171 out of 180 countries [24]. Staying at 164 in 1997, 1998 and 1999 though the ranking was slightly improved in 2000 at 163, but it declined at 171 in 2001 and stayed there till 2004 [25]. Enactment of ICT Policy and Act are not necessarily brings sufficient preconditions for ICT access and infrastructure development at the grass roots. Kenya is an example. They couldn't attain at any satisfactory level, despite introduction of ICT policies at the national level. Rather, subsequent interventions at the bottom level with prescribed action programmes are desirable to achieve real success. India is reshuffling its ICT policies since 2005 to reach out the common mass. Singapore, Japan and South Korea in this region are the leaders in achieving success in implementing strategic ICT initiatives at all levels. In recent years, Vietnam is taking off. To offer real benefit of ICT to the under-privileged communities, short-medium-longer term action based target-oriented initiatives need to be put on the table. Time is not far away when current sub-marine link will be absorbed by the domestic requirement, and the nation should not be put into wait for another decade to find another link to the outer world.

[1] **Random Access Memory**

[2] **Information and Communications Technology**

[3] **Gross Domestic Product**

[4] **Personal Computer**

[5] Digital Divide Report: ICT Diffusion Index 2005: p. 6

[6] www.grameenphone.com, www.banglalinkgsm.com,www.citycell.com, www.aktel.com,
and www.teletalk.com.bd

[7] Bangladesh Telephone and Telegraph Board

[8] Public Switched Telephone Network

[9] Digital Data Network

[10] Minimum Investment Unit which is equivalent to one STM-1

[11] South East Asia-Middle East-Western Europe submarine cable consortium

[12] Synchronous Transfer Mode at 155 Mbit/s

[13] Compound Annual Growth Rate and computed by the formula: $[(Pv/P0) (1/n)]^{-1}$ where Pv= Present value, P0= Beginning value and n= Number of periods.

[14] Digital Divide Report: ICT Diffusion Index 2005: p. 14

[15] <http://www.itu.int>- World's First Global ICT Ranking 2002

[16] World Summit on Information Society, 2003, 2005

[17] World Summit on Sustainable Development, 2002

[18] Young Power in Social Action

[19] Society for Economic and Basic Advancement

[20] Relief International's School OnLine

[21] Sustainable Development Networking Programme of Bangladesh, www.sdnbd.org

[22] Author may exclude any other reputed efforts in this sector, but unwillingly

[23] Bangladesh NGOs Network for Radio and Communication

[24] Digital Divide Report: ICT Diffusion Index 2005: p.60

[25] Digital Divide Report: ICT Diffusion Index 2005: p.61

Community Access Points or Telecentre Movement in Bangladesh

Submitted by Ananya Raihan on Thu, 2006-11-16 05:07.

Community Access Point or Telecentre Movement in Bangladesh

Basic paper prepared by Ananya Raihan and Suporna Roy of D-net Bangladesh

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Mapping Telecentre Initiatives

ICTs are not luxury anymore for many remote villages in Bangladesh, thanks to a handful of initiatives, which are getting ground through different models of telecentre. As the individual telecentre practitioners are working in isolation and many mainstream NGOs are going to launch telecentres following the existing models it was an imperative to coordinate these initiatives.

Telecentre movement in Bangladesh has been initiated by Development Research Network (D.Net) in August 2006 with a successful International Workshop on *Building Telecentre Family in Bangladesh: A workshop for Social Entrepreneurs and Practitioners*, held in Rangpur. D.Net joined hands with two other organizations, namely Bangladesh National Network for Radio Communication (BNNRC) and Yong Power for Social Action (YPSA) to organize this workshop, which was supported by telecentre.org and UNDP Bangladesh. It was also a collaborative initiative of Global Knowledge Partnership (GKP). Fifty-seven organizations participated in the workshop to get hands-on idea about why and how to build telecentres and share experiences. All telecentre practitioners came under a single roof for the first time to talk about Mission 2011, which is about building telecentre in every village by the 40th anniversary of Bangladesh's independence.

As many organizations and individuals are ready to launch telecentre in their own locations, it is important to map current telecentre initiatives and offer the new comers a wide choice of alternatives in terms of ownership, technology, focus, services and sustainability models. In this paper an attempt has been made to make a brief presentation of those initiatives. It is to be noted that information presented here may be incomplete and it is perceived that this would be a living document, where everybody will have scope to improve the description through on-line editing.

Gonokendra: Centre for Community Development

Dhaka Ahsania Mission launched first community learning centre, locally known as Gonokendra₁ in 1987. The centre is meant for lifelong learning and community development. There are more than 100 Gonokendras across the country, of which five are ICT-based. As the objectives of the centres were sharing knowledge and information, they started with traditional tools. Each of the centres is functioning as a community-based information centre of local GO-NGO extension departments. People can come to the centres to read newspapers and exchange experience, learn from success stories, get information about innovations, which can improve their livelihoods. A few centres started using computer for interactive information communication. However, these centres do not have any Internet connection.

Dhaka Ahsania Mission (DAM) supports these centres by supplying books, newspapers, newsletters, magazines, booklets, posters, wall magazines, etc. depending on level of literacy skills of the users. Basic and advanced educational programmes are being organized to cater the learning needs of local people. Linkages are being established by DAM to various other agencies to ensure access to other elements of better lives such as, health, sanitation, education,

environment, credit and recreational services etc.. Ganokendra members participate in various social activities.

DAM is seriously considering graduation of these centres through integration of ICTs following D.Net's "Pallitathya Model". DAM is also starting collaboration with D.Net for developing digital content, which is needed by the rural community for improvement of their livelihood.

Amader Gram Learning Centre (AGLC): Community Database for Development

Amader gram project has established village communication, information and learning center in April 2001 in Bagerhat, (in South-west part of the country) on pilot basis. This Rural Information Center was designed to develop participatory monitoring and learning system at the village level. Accordingly, 10 Group leaders (women) have been trained to act as Information Service Providers ISP/Focal points. Those trained persons are women group members and held responsible for data preservation, analysis and dissemination.

Under the project five village information, monitoring and learning centers have equipment like computer, printer, telephone etc. There is one center for overall coordination and monitoring and 4 other sub-centers have been established by taking 5 villages in each group/cluster. The coordination center is based at Khulna City and the 4 sub-centers in selected spots; those are centrally placed within the villages.

The centers are primarily used as data reservoir containing all household data of the beneficiaries, basic information of their socio-economic status, the conditions of the society , and basic data on geography, culture, heritage, local resources and local governance issues. Not only be preserved, but also those data are updated, analyzed, discussed, shared and used by the trained group members. Group members share the data in their daily, weekly and monthly meetings, which give them scope of reflection on their improvement of livelihood status. Those data are accessible to the community people. It is helping the entrepreneurs (at micro-level) by providing market information and promoting their products in the markets outside of their locality. Not only serving as a resource database, the project is creating opportunity for a large number of unemployed youth groups in computer application, training and services. This is released their time for productive purposes. The database also created a non-profit market opportunity by the user group like university professionals, researchers, and by the international/local institutes.

Such a center has got immense potential to be used in upgrading community education. It will be handed over to the selected teachers and learners who will facilitate the community people to greater use of information, knowledge and educational inputs. AG has planned to replicate this

center in other areas of the country, after its pilot phase. Such an effort may provide some effective input to the coordinated poverty alleviation efforts of Govt and NGOs in the country.

AGLC has been showcasing in DFID (Knowledge Bank) as a successful ICT initiatives at the grassroots level. This was presented as a successful case of Grassroots ICT model in the Multistakeholder Gathering workshop Bridging the Digital Divide, held in October 2002 in Kuala Lumpur, Malaysia which was organized by World Economic Forum (WEF), ICT4D Platform during WSIS2003 in Geneva (sponsored by SDC) and in 2005 in Tunis (sponsored by UNDP).

Internet Learning Centre: School Based Telecentre

Relief International-School Online initiated this programme with research in 2003. The centres have been launched in 2005. Currently 27 Internet learning Centres (ILCs) are in operation across Bangladesh, majority of which (16) are located in Chittagong. Dhaka hosts 4, Comilla hosts 3, Jessore hosts 2, Khulna and Rajshahi each hosts one such 'telecentres'.

Each ILC is equipped with 5- 10 computers with UPS for each, one long-backup IPS, one scanner and one digital camera. Connectivity varies from location to location. In some places ILCs are equipped with broad-band Internet connections and others have dial-up connectivity. The ILCs are located in Upazilla headquarters.

ILC facilities are available to student throughout the school-day. ILCs offer education and training programme for school children. The teachers also receive required skill training. The curriculum followed in the education and training programme is developed by global programme. The curriculum emphasizes on project and collaboration-based learning. The Internet facilitates communication, collaboration and sharing with other students. Students can communicate with fellow student in ILCs located in other places and also countries. The Internet is also used as a source of information.

A small amount is generally charged for membership of the ILC. The money collected from the membership fees are spent for recurring expenditure. It is not although clear how community access is ensured in these ILCs.

The data is not available on how any students, teachers and community people have benefited from the ILCs.

The ILCs are jointly owned by the RI-ISO and school teachers. Again the teachers' involvement in terms of ownership needs clarification. The information about the time of completion of project phase is also not available at this point of time and how the ILCs will continue functioning after the project period.

Youth Community Multimedia Centre (YCMC)

YCMC is located in Sitakund Upazilla of Chittagong district. Young Power in Social Action (YPSA) launched the centre in 2005.

The centre is well equipped with computers with CD-ROM, pocket PC, digital video camera, audio recorder, cassette playback, cable TV, cable radio and DVD-players. The centre also uses loudspeakers to disseminate useful information to the community. Bulletin boards are also used for information dissemination. The centre is connected with dial-up Internet connectivity.

The target group of the YCMC is local youth. The local community participates in the management and administration of the CMC through an autonomous body and helps decision making of the centre.

Outreach of the YCMC is ensured through traditional media, like street theatre and group meeting. These traditional communication tools are used for information dissemination and raising community awareness on various important issues. Weekly movie show and cultural events attract community youth to the centre.

In-built ethnographic action research helps documenting project learning and linking it back to the project's plan and activities.

The project is sponsored by UNESCO. The YCMC generates income through commercial computer training, photocopy, printing, and videography for financial sustainability. It is although not clear how the centre will continue after the project period.

RTC (Rural Technology Centre)

As an innovative intervention in rural appropriate technology transfer Practical Action Bangladesh established two Rural Technology Center (RTC) one in Rajoir, Madaripur and the other in Sarishabari, Jamalpur in 2006. RTC fulfills its institutional mandate to make available affordable and appropriate technologies for accessing information and communication technology services. RTC took initiatives to engage and promote appropriate rural technologies effective in meeting the basic scientific needs of the rural population and improving their livelihoods. The centre upgrades traditional technologies and adapt new technologies to make it more diversified and versatile to meet rural needs. The RTC manages and maintains library with two bookshelves to preserve printed technology materials for beneficiaries and extension workers. They also maintain a computer and land phone with internet connection which provides information and technology services for farmers, traders, entrepreneurs and other clients. A photocopier in RTC helps clients to make copies of his/her selected technology papers on payment. Height weight

measurement tools and charts are available in RTC. Essential agro-processing equipments such as grain moisture meter, refract meter, pH meter, salinometer, acid titration set, spice grinder, micro-wave oven, milk cream separator, digital thermometer, blender, mixing tank, sealing machine, heat gum etc. are available in RTC for demonstration and use to prepare pickle, chutney, jam, jelly, chanachur, spices powder etc. on rental/payment. RTC also provides employment information for local unemployed youths, including educated youth from poor families, displaced workers, and the underemployed. RTC is mainly a self sustained private facility which helps to increase the growth of village economy.

GHAT: Rural ICT centre (RIC)

The RIC is run by DEN (Digital equity Network) with its own investment and support from KATALYST, a multi-donor consortium working in Bangladesh. Three RICs, located in Kahalu, Panchbibi and Shibganj of Bogra district, were launched in 2006. A Rural ICT Centre is a physical infrastructure with basic ICT facilities (phone, computers, printer, scanner, internet connectivity, digital camera etc.). All three centres are located in Upazilla headquarters.

The motto of this model is developing and promoting ICT services to meet information and advisory needs of micro, small and medium enterprises (MSMEs) in Rural Bangladesh. The market research for this model was conducted by D.Net and MART, India. As a result, content based information service received attention. RICs disseminate business information for the local businesses in selected sectors (e.g., poultry, fisheries, potato etc) that are dominant in the localities. The centre is also a source of various social, health-related, education development, and government information.

Each RIC is equipped with 4 computers, 1 colour printer, 1 scanner and 3 digital cameras.

The data on users particularly number of entrepreneurs who received business information is not yet available in public domain. Similarly, data on number of users of various ancillary services like photography, photocopy, e-mail, composing, Internet browsing are also not available.

Financial part of RICs, particularly income of the RICs per month and operating costs as well as one time investment is not published yet.

Community Information Centre (CIC): A Profit-oriented Model

The CIC model is initiated by Grameen Phone, the largest telecom operator in Bangladesh. The first 16 CICs were launched in February 2006 as a pilot project in different parts of the country. Of them, four each were set up in Sylhet, Rajshahi and Khulna divisions and two each in Dhaka and Chittagong divisions. In May 2006, another 10 CICs were established, of which 7 in Chittagong, 2 in Dhaka and one in Rajshahi divisions.

The Community Information Centres (CICs) are equipped with at least one computer, a printer, a scanner, a web cam and an EDGE-enabled modem to access the Internet using the EDGE connectivity.

The CICs are fully owned by local entrepreneurs with a minimum investment of BDT 80000. The CICs are run as a franchise of Grameen Phone.

The CICs help rural people to stay in touch with their friends and relatives living abroad using email, fax and instant messaging.

Presently, access to passport forms, birth and death certificate forms and other related information are available through the Government websites. Market prices of agricultural produce are also available through the website of the Agricultural Extension Department. The CICs also help students and professionals for gathering reports and news suiting their requirements. Information relating to local and foreign job search sites is available at the centres. Grameen Phone has a plan to launch 60000 CIC across the country. It is also planning to use 'Jeeon-IKB', the CD-ROM based livelihood digital content, developed by D.Net.

'Pallitathya Kendra': Focusing Access to Information for Poverty Alleviation

D.Net conceived the idea of 'Pallitathya' in 2001 with a research on relationship of ICTs and poverty alleviation started in 2001. The research established that access to livelihood information could improve livelihood of the poor. In the second phase of the research, the D.Net conducted a detailed research on identification of information needs of the rural poor and their current information-seeking pattern. Based on the needs assessment, D.Net found that while traditional channels are important and un-replaceable by ICTs, it still can play a critical role in allowing access to many livelihood information and knowledge. As there was no tailor-made digital content for the rural people, D.Net started developing content in nine areas of livelihood. This content is now more than 30000 pages and packaged in "Jeeon-IKB"- information and knowledge base for the rural community.

D.Net established four 'Pallitathya Kendra' in 2005 in four remote villages of Bangladesh, located in Nilphamari, Netrokona, Noakhali and Bagerhat on a pilot basis to capture the process of learning and replication. D.Net devised a number of innovative mechanisms to make livelihood information accessible to the poor rural community people. The carefully crafted mechanisms through established "Pallitathya Kendra" [Rural Information Centre, RIC] allowed D.Net team to reach particularly women and people with various handicaps who seldom go outside their homes. The innovations and critical elements of the project were:

1. Focus on needs of the poor, rather than focus on the technology, thus D.Net identified information needs and other livelihood needs through participatory research
2. Focus on 'no exclusion' policy, so that rural community can think of the RICs for all, this policy was possible to implement for two specific design elements:
 1. as a vast share of rural community is illiterate, the concept of "infomediary" [information intermediary, a human interface between knowledge-base and rural illiterate people] could allow these group to get the benefit of technology for getting solution to their livelihood problems;
 2. as women have limited mobility due to social taboo and people with physical handicap can seldom visit the RICs, the concept of 'mobile lady' [a female information worker with a cell phone connected with a help- desk of experts on various livelihood topics, the service is called help line] could allow D.Net team reach every body in a village
3. Focus on 'no refusal policy', so that rural community can rely that whatever problem they have, if the come to the RIC, they will get definitely an advice. It was possible to implement this policy thanks to the concept of 'combination of computer based knowledge base and help line. Once a villager calls to the help desk, the reply is guaranteed, either immediately, or after a reasonable time [depends on complexity of problem, experts collect answers and respond through mobile, e-mail, letter, whatever feasible]
4. Focus on local language demand-driven content, which is capable to respond to the livelihood problems of the villagers. With the support of IDRC and two other institutions D.Net was able to develop significant volume of content, which was used in the RICs. This browser-based IKB (information and knowledge base) is going to be used by a huge number of institutions.
5. Combination of core information service and ancillary services, which complementary in nature rather conflicting in terms of skills requirement of the infomediary. Such approach allowed the RICs to earn money.
6. Focus on community relationship and inspiration of local institutions. As a research project, the tasks of D.Net were to test various approaches for the right of survival. Involvement and inspiration of local institutions brought new idea about sustainability: both financial and social. The research proved that if local institution braces the concept and community see benefits, then they take care of both financial and social sustainability.

Each of the 'Pallitathya Kendras' have 3 computers, 2-3 mobile phones, UPS and power back up, digital camera, soil test kits, nebuliser for rent by the local doctors, weighing machine, the livelihood content 'Jeeon-IKB'. The centres are connected to the Internet through Grameen Phone's network and EDGE technology.

D.Net's core competence is now in content development, 'infomediary training', technical and functional know-how, networking service and foremost, the Help Line, for which D.Net received Global Gender and ICT Award in 2005 in WSIS.

D.Net Pallitathya programme is run with support from IDRC, Manusher Jonno, Research Initiative, Bangladesh (RIB) and its own resources, earned from donations and research income.

Constraints/ Challenges

The major constraints for telecentres in Bangladesh can be classified as technical constraints and sustainability problem. Electricity has become a big issue as power supply situation has been deteriorated alarmingly and there is no hope for recovery at least in next two years. Power-back up systems is available but that makes the operations of the centres very costly, as a result financial viability is becoming vulnerable.

The second challenge is reliable connectivity. It is true that Internet can be accessed from most of the villages thanks to the extensive mobile phone network in the country. However, bandwidth is not adequate for advanced applications and to build up cost-effective solution for the poor groups.

Secured infrastructure is another challenge. If the government infrastructure, such as Union Parishad building, post office etc. could be used then it could ensure secured and cost-effective infrastructure for the end users.

It is important to note that financial viability is possible to achieve, but in that case the access to information services, which is the main attraction of the telecentres, will be restricted for the poorest part of the rural community. Here comes the role of the government and development partners, who can provide infrastructure, connectivity and power supply. The rest can be taken care of by the local community.

Building Telecentre Network

Building Telecentre Network is very essential for a number of fundamental reasons. Firstly, avoiding establishment of more than one telecentre in one village, at least at the initial stage. One should understand that it is not micro credit that many MFIs can survive in parallel. Secondly, supplying and collecting digital livelihood content is a continuous process and a costly proposition. It is quite possible to build partnership for content development and update. Thirdly,

capacity building of the telecentre workers is one of the most critical issues for success of the telecentres. It is not possible to train 300,000 telecentre workers in next five years by a single organisation. Finally, resource mobilisation is important for establishment of telecentres, which will come from individual entrepreneurs, local organisations, government, private sector, development partners. Such resource mobilisation is not possible by a single organisation again. Mission 2007 is a very good example to learn how all stakeholders came together for building a new India through establishment of 600,000 telecentres in all villages of India.

Community Radio: Ready to Launch in Bangladesh

Submitted by editors on Tue, 2006-11-14 01:33.

Community Radio: Ready to Launch in Bangladesh

(Basic paper prepared by Golam Nabi Jewel and AHM Bazlur Rahman of BNNRC)

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1. Introduction:

Bangladeshi media enjoys freedom in general. But there is some sort of 'self censorship' in many cases and sometimes media face 'invisible pressure' from the owners to protect their interests. A strong community media can play very important role in making a balance between public and commercial media. To accomplish it, there is a need for enacting a national broadcasting law.

2. The Draft Bangladesh Broadcasting Act, 2003

A draft for enacting a broadcasting law was prepared. An independent authority, called Bangladesh Broadcasting Authority will be formed, which will issue various types of broadcasting licenses for radio, television, terrestrial, satellite or cable classified under public, private and community. After enacting the law, non-profit entity can start community broadcasting by using radio, television and Internet. Bangladesh is now ready to launch community radio in the rural areas.

3. Importance of Radio and Community Radio

Radio can easily reach the people living in remote and rural areas even if there is no phone or electricity. Radio reaches people who can't read or write. Disseminating information mostly depends on public media but it has failed to prove itself people-friendly over the time. As a result, commercial media gained popularity. Community broadcasting is needed to ensure people's participation, which is also sustainable. Main objective of community radio is to strengthen democratic process at a local level. It will help diversity of content, information and nurture culture. It will also encourage participation, sharing information and innovation at the local level.

4. National Media Survey 2005

National Media Survey (NMS) 2005 is the fourth national survey of its kind undertaken in Bangladesh. The importance of media research in order to determine the reach of various media vehicles and gauge media habits among different target segments of population is well established in the fields of communication and marketing.

4.1 Status of Use of Radio:

- The ownership & reach of radio seemed to be declining. Only 32% people own radio of which only 27.3% radios are in working order. This is so because public radio has failed to attract people and opportunity to watch TV has gone up rapidly.
- Only 22.5% people listen radio. Radio audience has declined in urban areas sharply. As in the past, radio reach remained higher among males (30%) compared to females (16%).

Dhaka is the most popular radio station having 31.3% listenership.

4.2 Status of Use of Television:

- Almost 41% households own Television. Although there was a wide variation between urban (78%) and rural (27%) areas, 26% households own black & white TVs whereas 15% were found color.
- Nearly 10.4% households had cable connections. So, 25% households had satellite penetration among the total TV owning households.
- The survey results indicate a persistent increase in viewer-ship of TV over the years. Viewer-ship of TV in the year 2004 was about 64%, which was one and a half times higher than that in 1998 (42%) and two times higher than the viewer-ship in 1995 (31%).
- The TV reach in urban is 87.9% while 55.5% in rural areas.

4.3 Status on the use of Internet

- Internet usage is still at the primary stage with 1.2 % and limiting only in urban areas but is on rise day by day.
- Internet usage frequency is not in a regular basis. A number of people use Internet in an irregular basis like once a week or a month.
- Major use of Internet is still limited in sending or receiving e-mails. Some others use for getting news or searching jobs.

4.4 Any Media Reach:

By Region (%)				
	Nation	Urban	Rural	Metro
Any Media	71.5	91.6	64.1	94.3
Not Any	28.5	8.4	35.9	5.7
Total	100	100	100	100

By Division						
	Dhaka	Chittagong	Rajshahi	Khulna	Sylhet	Barisal
Any media	74	75.5	67	66.7	68.6	74.8
Not any	26	24.5	33	33.3	31.4	25.2
Total	100	100	100	100	100	100

By sex ratio (%)		
	Male	Female
Any Media	79.4	63.7
Not Any	20.6	36.3
Total	100	100

4.6 Media Trend:

picture...

5. Enabling Environment:

We can divide our broadcasting facilities into two segments. The public service broadcasters like Bangladesh Television (BTV), and Radio Bangladesh (Bangladesh Betar) and the commercial broadcaster like satellite TV channel and commercial FM radio. BTV operates one national terrestrial channel that extends to almost 100% of the country as state monopoly, airing around 15 hours programme. It also airs 24 hours programme under BTV World. There are 9 satellite TV channels operating by private sector for urban communities. These are NTV, Channel I, ATN Bangla, STVus, Channel S, Baishaki, Channel I, RTV, Bangla Vision. There are 4 commercial FM radio station operating.

There is a number of problems with present licensing policy. First, there is no statutory and clearly established process for obtaining a license for broadcasting. This has led to an ad-hoc approach to licensing and politicization in the process. Second, there is no rule for granting a

license. This deprives the decision-makers of a clear, public interest driven means to assess individual applications. Third, there is no system for regulating the content of broadcasting and, in particular, for ensuring that it meets certain minimum standards both in relation to regular programming and advertisements. Fourth, all decisions are made by the Ministry of Information rather than an autonomous body. The licensing process is widely politically considered.

6. Role of NGOs/CBOs:

Bangladesh is a land of only 55 thousand kilometer with 150 million populations. Majority of the population do not get proper education. They are not aware of the causes of major social issues, like environmental hazard, health issues like arsenic or economic issues like poverty. Community Radio could be a solution and NGOs can play a major role in this regard. NGO activities and programmes have already gained reputation and their project areas are limited and well defined. But they need to win the confidence from the local community.

A number of NGOs/CBOs is trying to launch community media and establish independent broadcasting station at the community level, which will dedicatedly operate on non-commercial basis. Community radio, which has been playing an important role in transmitting local information, e-learning, entertainment, disaster management and mass awareness on different issues in most part of the world, could be turned into a major means of transmitting information during natural disasters in the coastal areas.

Center for Development Communication (CDC) and later Mass-Line Media Centre (MMC) took an initiative to establish community radio. BNNRC a national coordinating organization is dedicated to promote radio, community radio and citizen band radio for the development of this area.

BNNRC is now trying to utilize existing local contents, infrastructure & human resources of NGOs/CBOs to nationwide through tele-centers, rural knowledge centers (RKC) like backbone for community radio.

7. Policy Advocacy Plan for Community Radio:

Community Radio will help build strong leadership, accountability among the local government and political leaders. It will help people get access to media and build community networking. It will help establish a two-way communication between the recipient and the givers.

In March 2006, a roundtable on 'Community Radio' was jointly organized by Bangladesh NGOs Network for Radio and Communications (BNNRC), Voices for Interactive Choice and

Empowerment (VOICE), MMC, FOCUS and Young Power in Social Action (YPSA) in association with UNESCO, UNDP and UNICEF in Dhaka.

Policy recommendations include:

- Greater awareness is needed about the educational and developmental potential of community radio among policymakers, regulators, non-government and community service organizations.
- Assistance is needed to enable existing community radio stations to adapt to new digital production technologies and to increase their access to the Internet.
- Strategic links should be encouraged between community radio and tele-centre/ Rural knowledge Center (RKC) development to cluster community media resources.
- Online and technology-based learning centers should incorporate creative production facilities and access to local radio distribution as well as the Internet.
- Support for community radio development should be provided through intermediary bodies at national and regional level through training, guidance and mentoring.

8. Ready to Launch:

BNNRC and other NGOs have taken preparation about how to run a Community Radio if it is permitted. Preparations are there to make local content, place selection, build up a plan for human resource development and sustainability Community Radio operation in long-term. YPSA, the network member of BNNRC built up a Cable Radio Station at Sitakundo in Chittagong. SPEED Trust from Barisal, DUS from Noakhali, COAST from Bhola, Sankalpa from Barguna also produce local content in this way. MMC and VOICE made local content also.

9. Conclusion:

Immediate objectives are to obtain support and approval of the Ministry of Information to run the proposed pilot projects, start pilot community radio initiatives in order to achieve different development goals. Enactment of the proposed Bangladesh broadcasting law will provide a policy framework for community broadcasting.

E-Governance: Bangladesh Perspective

Submitted by editors on Thu, 2007-01-04 19:56.

1 eGovernance in the Bangladesh Context

Basic paper submitted by K.A.M. Morshed, UNDP Bangladesh

(** Please Note: For editing, please try not to delete existing write ups, rather add or use rejoinder to put forward your arguments/information/correction at the end of each sentence or paragraph. It is always better to type things directly, otherwise if you are copying and pasting from other sources, please do copy it first to Notepad or any simple text editing software before pasting it here. Copying and pasting directly from Microsoft Word/Open Office may make the text garbled).

Governments, much like businesses, have two major efficiency criteria. First, in the short term it has to reduce the cost of production of the commodities that it produces and second, in the long term, it must also improve the shareholders wealth by increasing its value in the market. In case of governments, both the stakeholders and consumers are the same, the people. And the market also constitutes of roughly the same group of people.

Put in context, it can be said that, the government must deliver its services at the least possible cost and, in the long run, it must earn the confidence of the people by providing the services that people want. A properly designed and implemented e-governance system has the potential to help government to fulfil both the efficiency criteria.

In the Bangladesh context, the following can be the most direct gain that e-governance can bring to the country.

- Enhance the Transparency, Accountability and Efficiency of government: e-governance provides the right tools for monitoring of the government activities by its citizenry by allowing the government to follow predefined and transparent processes whose quality and efficiency are measurable.

- Greater decentralization of governance: e-Government systems make decentralization of government services and makes decentralized decision-making easier.

- Makes ICT relevant to the masses: e-Government systems make ICT relevant to the masses as its benefits gradually extend to citizens and communities throughout the country.

- Private sector development: e-governance systems allow for easy accessibility to government services and allow businesses to access government services on the fly thereby enhancing overall competitiveness of enterprises in a country.

2 E-governance and Bangladesh: Challenges

2.1 Technological Aspects

As is in most of the Least Developed Countries, Inadequacy of ICT infrastructure is a common problem in most government offices of Bangladesh. This situation is further

compounded by the marked absence of technical infrastructure planning and sub-optimal utilization of whatever infrastructure is available.

The other challenge is in ensuring 'sustainability' of ICT infrastructure. Often due to myopic planning of development projects lead to a lack of integration of ICT based systems into the core business processes of an organization and the long term financial sustainability aspect of ICT infrastructure is ignored.

2.2 Human Resource

Due to lack of institutionalized means of developing related skills many e-Government implementation projects suffer from lack of skilled human capital. Only ICT skill courses available for the civil servants are not enough to bridge the gap. There is not much done for the civil servants to enhance their 'soft-skills' associated with managing implementation of e-Governance systems. Government institutions may explore introducing courses on 'change management', etc. to address such deficiencies.

Absence of incentive for acquiring ICT skill is also considered as one of the reason for lacking of ICT skilled human resources in the government. Indeed, in most government offices the use of IT is mostly self-motivated and a matter of individual self-development.

2.3 Economic Aspects

The economic/financial challenge for e-governance system implementation in Bangladesh is two pronged. First, like most developing countries, Bangladesh faces difficulties in investing large sums in e-governance system from its own coffer. Absence of pro-private sector policies impedes this other potential source of investment.

There seems to be a marked need for building capacity of the civil servants to conduct cost-benefit and results-resources benefit analysis before approving e-governance projects. Indeed the lack of managerial acumen and technical know-how to analyze the cost-benefit scenario and return on investments to assess financial sustainability of a project is hurting the country's e-governance aspirations. It is also an important reason why the private sector remained as a sceptic bystander rather than a active partner in e-governance.

2.4 Social Aspects

In Bangladesh, a country where 'disparities' between haves and have-nots are ever increasing, introducing ICT in the governance mechanism faces the challenge of ensuring equitable access to e-governance services by all strata of the society. It is essential to create public awareness with regard to e-Governance services that are available and could be made available to everyone.

The other social aspects that come under e-Governance challenges are lack of literacy and a weak basic education standard; standardization of Bangla for official use; and the 'Brain Drain' of ICT skilled human resources from the government.

2.5 Administration

More needs to be done to sensitize senior government officials with regard to e-governance and the benefits inherent to it. It is mostly due to this lack of awareness that e-governance systems lack buy-in from the senior management of government organizations. Such lacking of acceptability often means lack of sustainability of the system and even failure to implement such a system.

E-governance requires rethinking the standard operating procedure. The existing administrative rethinking mechanism is not aligned with e-governance activities and plans. Such lack of coordination between administrative reform and e-governance is another challenge that we are facing too.

Finally, in absence of central e-governance coordinating and monitoring entity the tasks of prioritizing and controlling the quality of the e-governance projects remained as a challenge in Bangladesh.

2.6 Legal Framework

The nation still needs to strive to have an operational regulatory / legal framework including relevant Cyber Laws. While the ICT Act has been approved recently, the work of drafting the bylaws (19 of them) and rules might take still some time.

2.7 Local content

There is a dearth of local content available in the country. This plays an especially important role in the government since even if an officer is connected to Internet the relevant knowledge resources available to him is limited. This often limits the need or wants on the part of government staff to access the Internet as a part of their normal working routine.

3. Way forward: Need for national strategy

The single most important lesson learned during almost two decades of e-governance initiatives of the country is 'e-governance is a strategic choice not an operational alternative for service delivery'. A nation needs to be sufficiently 'ready' before shooting for e-governance objectives. A national e-strategy is required to address the following fundamentals elements of e-governance readiness.

- E-governance Awareness among public servants: training courses for government officials should move beyond the office productivity suite to conceptual courses that enable them to conceive ICT as a strategic asset rather than operational tools.

- Facilitate public private partnership model to work: E-governance initiatives are often capital intensive and have to compete with projects addressing other national development priorities. Additionally, e-governance projects are often riskier than more traditional development projects. Hence, most countries that are seriously pursuing e-Government have partnered with the private sector to share the costs and risks of starting and running e-Government projects. A concrete policy framework and directive is needed to engage the private sector for Bangladesh too.

In this context, the government needs to look into the possibility of outsourcing most of the service delivery and substantial part of service production function to the private sector.

- Enhance access to ICT tools for citizens: the government needs to ensure equitable access to government services delivered online to all potential users. It is therefore important for the Government to invest resources and introduce policies to extend access to ICT throughout the country. Participation of public sector needs to be ensured to speed up infrastructure roll out. Innovative means of content delivery like mobile telephony, community radio, etc. based solution should be encouraged and explored.

- Creation of local content: The government should take the lead in creation of locally relevant content in the local language. At the same time, preservation of local knowledge in easily understandable forms must be encouraged. In the backdrop that most of Bangladeshi's cannot read and comprehend written text strategies to encourage voice and video data should be developed and implemented.

- Adopt open standards and open source solutions: It is highly unlikely that the country can embark on a single project to develop both its hardware and software solutions and can only address these needs gradually. To enable the nation to undertake small but manageable projects and gradually build up its e-governance maturity, it is important that the nation adopts an open architecture for easy interoperability.

- Plan for the long term: E-governance systems bear fruits only in long term. Failure to recognize this long gestation period often results in unnecessary frustration and experimentation resulting in the loss of resources and motivation among the users.

4. Successful e-governance initiatives:

Mixed with failed or not so successful e-governance initiatives are a few truly successful initiatives that demand special mention here (in alphabetic order).

- Automation of Internal Processes: Bangladesh Bank began to computerize its functions almost at the same time most government offices started investing in automation. However, the Bank is only among the handfuls that have been successful in integrating ICT into the core business processes of the institute. Today it is one of the most fully computerized public institutions in the country. The current system actually automates most of the Banks operational processes and some of the most important strategic processes including monitoring of commercial bank transactions.

- Electronic Birth Registration System: Electronic Birth Registration System was introduced by The Rajshahi City Corporation (RCC) and the Local Government Division of the Ministry of Local Government with technical and financial support from UNICEF. This is probably the best local level e-governance example of Bangladesh where a local government body, in their own initiatives and leadership and with support from a development partner took such a bold step forward. The system also doubles as an immunization management system. Once registered, the system also generates an immunization schedule for every child. To system generated ID is also used to get admission in the public schools of the city.

- Financial Management System: On the backdrop of not to successful project such as reforms in the Budgeting and Expenditure Control (RIBEC 1 and RIBEC 2) and somewhat successful RIBEC 2A and then RIBEC 2B , Ministry of Finance has gradually and surely the ministry of Finance now have developed a quality MIS system that is successfully used for budget planning, sensitivity analysis, impact analysis, financial projections and other core processes of the ministry.

- Government Forms Online: Accessing government forms online is made possible by the Prime Minister's Office of Bangladesh though a project funded by UNDP Bangladesh. This not only saves time but also the cost and hassles associated with the travelling to the government offices located at a distance.

- Hajj Web Site: The Ministry of Religious Affairs, GoB introduced the Hajj Web Site in 2002 to service ten and thousands of pilgrims who go to Mecca to perform holy Hajj. During the Hajj, the website also acts as a important information portal for the family members of the pilgrims and other interested persons and organizations. One of the best examples of a Public-Private Partnership project, the site provides timely and reliable information to a large segment of the population.

- MIS for Project Management and Transparency: Department of Roads and Highways, Ministry of Communication, GoB, developed this MIS as a component of a World Bank funded

project for the institutional development of RHD. The eGovernment initiative of RHD involved the launch of a website that provides a variety of information, data and notices to users. Website users include the private sector, related government offices, ordinary citizens, and donor agencies.

- National Board of Revenue: Several development projects like Asian Development Bank funded 'Customs Administration Modernization Project', International Development Agency funded 'Excise, Taxes & Customs (ETAC) Data Computerization Project', World Bank funded 'Modernization and Automation Project' etc. much of the core processes of NBR and some of its citizen services has already been computerized and implemented successfully.

- Personnel Database: The Personnel Management system (more of a database with some analytical reporting) of the Ministry of Establishment is probably the oldest eGovernment initiative that is still in use and in demand. The database is maintained by the technical personnel within the ministry and maintains the personal information card for each government employ of the 'Administration' cadre including their respective annual confidential reports.

- Railway Ticketing: Technically, Railway ticketing might not be a simpler eGovernment project but from people's convenience perspective, this is one of the important ones. Bangladesh Railway outsourced the job to a local IT vendor. With a few technical hiccups the system was put to operation in 1996. The vendor owned, operated and maintained the system till early 2002. The system was then transferred to Bangladesh Railway, who later decided to outsource its operation to another private vendor.

Localization and Open Content Development in Bangladesh

Submitted by editors on Thu, 2006-11-16 05:35.

Localization and open content development in Bangladesh: Initiatives and Achievements

(Basic paper prepared by Munir Hasan and Ragib Hasan)

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it here. Copying and pasting directly from Microsoft Word/Open Office may make the text garbled).

1. Introduction

Enabling ICTs in the local language of the user is known as localization. Specifically, it is enabling computing experience in linguistic culture of the user. Bangla is the primary language for 130 million people of Bangladesh, however, organized effort of Bangla software and content localization efforts are not very visible in the country. . It is obvious that before any content can be generated or any application is developed, some basic standards for encoding the language must be developed. These include character set encoding (ASCII/UNICODE), key board layout, key pad layout (e.g. for mobile telephones), collation sequence (to enable applications like database), terminology translation and locale definition (to enable computer interface in local language).

The first attempt of localization started in the early 1980s with Bangla font development in windows environment and many fonts were developed in haphazard way resulting in a gross interoperability. Absence of planned activities and policy resulted in different key-board mapping and made the localization a cumbersome process. The UNICODE in late 90's shed a new light on this issue and after that the process of localization began to take a new shape in the country. The open source software till then has the most significant affect in the localization. In 1998, Mr. Tanim Ahmed first solved the locale issue (bn.BD) and started a process of localization of Linux (<http://Banglalinux.org>). Since then the major initiatives were run by the volunteers. However, in recent days the institutional initiatives are also in the scene.

Open content in Bangla language is rare in the Internet. Similarly, encyclopedic content in Bangla has traditionally been limited to the print media only. The Bangla Wikipedia provides a great opportunity to create an accessible, free, and constantly updated encyclopedia. Bangla, spoken by 220 million people, is the 7th largest language in terms of native speakers. Therefore, it is vital to bridge the digital divide by introducing, expanding, and enhancing knowledge in Bangla language through the Internet.

2. Organizations involved

In the beginning, in 1980s the windows based localization (Font/Interface) were lead by commercial vendors. In late 1990s with the appearance of Linux and open source software, voluntary communities were getting in. After the initial effort of Tanim Ahmed, more volunteers took steps into the localization effort. The voluntary group Ankur (<http://www.ankurbangla.org>) started localization of open source software like Linux, open office, gaim etc. The other voluntary organization Ekushey started developing open source, Unicode fonts and bangla input system.

Some other volunteer groups and individuals came into scene. However, at this very moment the governmental efforts as well as any effective organizational efforts are not there. In 2004, Bangladesh Computer Council (BCC) took an initiative from the government side and came up with a national key board mapping and a collation sequence.

In this time, country's sole centre for localization has been created at BRAC University. The Center for Research on Bangla Language Processing (CRBLP) is currently conducting research projects that deal with Bangla language processing. At present the research team is working on Bangla information retrieval, (e.g., Bangla spell-checking, Bangla search engine), morphological analysis, developing a digital Bangla lexicon and an online dictionary, building an annotated Bangla corpus, Bangla computational syntax, Bangla optical character recognition and Bangla speech processing. This center is supported in part by a grant from the PAN Localization Project (PanL10n) of the International Development Research Corporation (IDRC) of Ottawa, Canada.

In 2005, Bangladesh Open Source Network (BdOSN) was formed with the local OSS volunteers. BdOSN, again a voluntary organization, took the Bangla localization as one of its main agenda and has started thriving OSS localization as the forerunner.

3. Achievement in OSS localization

Ankur and BdOSN completed the creation of glossary (Bangla term of computer term). Ankur and associates volunteers had already localized different Open Source Software. These included Linux distribution like Fedora, Mandriva, Suse and Ubuntu; Desktop environment like Gnome and KDE; Applications like OpenOffice.org, GAIM, Firefox and Thunderbird. However, all the above OSS needs are not completely localized. All these need a good intervention. For this BdOSN and Ankur started arranging Localization boot camp throughout the country since June 2006. Since then four boot camps were arranged and more than 10000 strings of Open office.org were translated in these camps. CRBLP developed an open source, full-featured cross-platform Unicode rich text editor capable of editing Bangla (BanglaPad), Bangla phonetic spelling checker and Java Interface for PC-Kimmo, a command line morphological analyzer provided by SIL. It was also noticed that in recent years more researches in the universities are now showing interest in localization.

4. Open content development

In Bangladesh, the main thrust sector in Open Content Development has been the development of the Bangla Wikipedia. It was organized by Bangladesh Open Source Network and its sister organization, Bangla Wiki. The project aims at developing a free, open access encyclopedia in Bangla language. Besides the Bangla Wikipedia, some initiatives have been

started in recent years to develop some open content in science, especially in mathematics. The Bangla Wiki project aims at organizing contributors to the Bangla Wikipedia, publicizing it through print and electronic media, and providing the support infrastructure for collaboration.

The Bangla Wiki project is loosely organized using Internet based mailing lists. Most of the participants are students in Bangladesh and West Bengal, or expatriates living in North America, Europe, and Japan. The organization has actively promoted Wikipedia and open content development activities in Bangladesh. It has conducted several workshops to familiarize the new users with techniques and skills related to the project. To promote public awareness, Bangla Wiki organized rallies during the Bangla New Year, and also observed August as the "Bangla Wiki Month".

Bangla Wiki has set up an office in conjunction with BDOSn for people with limited Internet connectivity. Here interested editors can access the Internet and contribute to Bangla Wikipedia. Also, people from other regions of the country can send articles via postal mail, which is later added to Bangla Wikipedia by Bangla Wiki volunteers.

Besides articles, Bangla Wiki has also focused on creating a free repository of images and other multimedia content. As of October, 2006, more than 400 images on various topics have been uploaded to Wikimedia Commons under Creative Commons or GNU Free Documentation licenses.

5. Achievements in Open Content Development

Since its launch in late March, 2006, the Bangla Wiki project has been extremely successful. Although the Bangla Wikipedia was initiated in 2004, it only had 540 articles till March 2006, with very little actual content. Initially, a target of 10,000 articles in one year was set. The project has been able to attract a large number of editors. As of October, 2005, the total registered editor count is 865. The number of articles in the Bangla Wikipedia has grown initially at a rate of 800 articles per month, with occasional burst of activity raising the rate beyond that. As a result of these activities, the Bangla language Wikipedia crossed the 10,000 article mark in September 2006, becoming the 50th Wikipedia, and the 2nd language from South Asia to achieve this.

As of October 9, 2006, the article count in Bangla Wikipedia is 11,814. It is ranked 44th among 200+ Wikipedias in different languages.

The project has also gained a lot of media coverage. Bangla language newspapers such as the Daily Prothom-Alo, Ittefaq, and Jai Jai Din have published articles focusing on the Bangla Wikipedia. BBC Bangla World Service broadcasted an interview of one of the organizers of the

Bangla Wiki project on May 2. Yahoo! news and many other news organizations covered the 10,000 article milestone of Bangla Wikipedia.

6. Conclusion

Access to information is no longer a luxury today but has become a basic human right. To make it available rightfully to people easy access should be provided. Just taking the technology for access to the end user in every household is not enough. In Bangladesh where a small portion of the majority communicates in English (the major language of the Internet), it has become an absolute necessary to provide people the internet and other computing applications in Bangla. For the past two decades the initiatives taken has proved to be fruitful. The obstacles that were there due to policy building has resolved quite a lot as the Government has decided to post the Government websites in Bangla beside English and also many websites in Bangla only. Private organizations has also come a long way and are still moving on to make localization and open content development. The success of Bangla Wikipedia and the researches going on today are all proves of that. Hopefully, with this public private partnership, the localization and open content development in Bangladesh will be successful before not too long.

Source: http://bangladeshictpolicy.bytesforall.net/?q=national_report