

GLOBAL INFORMATION SOCIETY WATCH 2008

Focus on access to infrastructure



Global Information Society Watch

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Introduction

Bangladesh has a population of 138.23 million with a gross domestic product (GDP) per capita of USD 520 in 2007. Almost 76% of its population lives in rural areas where the literacy rate is about 56%¹ and where 41% of people live on less than one dollar a day. The country has continued to make considerable progress in ICT sector development. Some of this has been registered through the wider penetration of ICT usage, infrastructure enhancement and a favourable regulatory regime. According to the International Telecommunication Union (ITU), there are about 450,000 internet users in Bangladesh (as of August 2007), which is about 0.3% of the total population. But the growth in mobile telephony is phenomenal. Currently in Bangladesh, there are about 40 million mobile phone users, many of whom are accessing the internet using their cell phone connection.²

The situation in the fixed/public switched telephone network (PSTN) market is not that euphoric. About 80% of all land telephone lines are in Bangladesh's four major cities where only 20% of the population lives. By the end of 2007 PSTN subscribers grew to over 1.19 million compared to 1.01 million in June 2006. Bangladesh got connected to the SEA-ME-WE 4³ broadband submarine cable in 2006. The data transfer capacity of the cable is 14.78 gigabytes per second (Gbps), of which 3.28 Gbps was being used until June 2007.⁴ Despite its demographic profile, Bangladesh has done relatively well in some social indicators such as improving female literacy and school enrolment, reducing infant mortality, increasing access to safe water and sanitation, etc. But although telecoms is one of the largest contributors to the growth of GDP in Bangladesh, its relationship with social and human development indicators is often not studied, or is not taken into policy consideration.

Legal and regulatory framework

In their research paper, "Regulating for the Next Billion", Rajendra Singh and Siddhartha Raja (2008) argue that a regulator has to deal with both supply- and demand-side issues. On the supply side, telecom regulators are involved in three fundamental types of issues: interconnection, resource allocation, and revenue management. On the demand side, however, the task of the regulator is typically indirect, especially since there is no way to order users to do something.

The regulator can, however, through control of the supply of ICTs, ensure that telecom services reach the underserved (universal service), that they are affordable (subsidies), or have some minimum standard (quality of service and inter-connection) (Singh & Raja, 2008).

Before 1996, the telecom policy environment in Bangladesh was a bit dismal, with the absence of any regulatory body and the monopolisation of the telecom network either by the government or by one private network (i.e., Citycell). During the early 1990s, the Bangladesh government rejected an offer to be connected to an undersea internet cable on security grounds. In 1996 the government first started to offer wireless licensing and opened up the market for more than one player. One of the wireless providers to surface due to this process was GrameenPhone, a subsidiary of Grameen Bank, a major development organisation in the country. The Bangladesh Telecommunication Act (April, 2001) founded the Bangladesh Telecommunication Regulatory Commission (BTRC) and marked a new era in the telecom regulatory environment.

The major functions set for this regulatory body as identified by the act are:

- To regulate the establishment, operation and maintenance of telecom services in Bangladesh.
- To control and abolish discriminatory practices and ensure a level playing field for operators and healthy competition.
- To hear and resolve objections, disputes and complaints through public hearings and issue injunctions.

So far the regulatory body has licensed four international gateway service providers (IGSPs), six mobile phone operators, 185 internet service providers (ISPs) both in Dhaka and elsewhere, 21 very small aperture terminal (VSAT) operators, and six zonal PSTN operators. Recently it decided to process 116 community radio licences in the coastal and remote areas of Bangladesh. BTRC is also responsible for setting regulation to introduce next-generation telecom networks and services in Bangladesh. As part of this, BTRC recently started to provide licences for voice over internet protocol (VoIP) services (e.g., for call centre operation), third generation (3G) services, and WiMAX services.

Different legislations have resolved many telecom interconnection issues that are pertinent to wider telecom penetration in the country. For example, the Interconnection Regulations 2004 stipulated that an interconnection agreement should be executed within three months from the first

1 www.apdip.net

2 www.btrc.gov.bd

3 South East Asia-Middle East-West Europe 4

4 www.btrc.gov.bd

day on which the new operator starts providing telecommunication services. The Bangladesh Telecommunications Act 2001 also states that if interested parties, who are bound to execute interconnection agreements, cannot agree on the terms of such an agreement, any of them may approach the commission for judgment.

The deregulation of the telecoms sector has continued to fuel the competitive environment, especially in the mobile phone market. The six mobile phone operators are in fierce competition, a situation which has led to a call rate reduction to a level which is the lowest in South Asia. Some of the operators have started to offer a call for the equivalent of a mere USD 0.004 – the base rate offered by BTRC.

The private sector has 98% of the market share in the mobile telephony sector. But in the fixed-lined telecom market, the Bangladesh Telegraph and Telephone Board (BTTB), the incumbent operator, has 74% of the market share. In response, BTRC divided the country into five zones and has allowed for 35 licences to be granted to fifteen private sector PSTN operators under an open and transparent licensing system. In March 2006 BTRC invited bids from private operators so that it could award four licences to the private sector for operating in the central zone. The new operators started offering connections from September 2007. It is predicted that after the deregulation of the fixed-line telecom market in Dhaka City, the PSTN will grow more than 100% by the end of 2008.

The country's first call centre licensing process has been very open and transparent. Before issuing the licences, BTRC organised a public consultation to develop guidelines. To encourage youth employment and investment in call centre businesses, its guidelines proposed to issue the licences in three broad categories: call centres in Bangladesh, hosted call centres in Bangladesh (for companies without infrastructure) and hosted call centre service providers in Bangladesh. The licence fee was BDT 5,000 (approximately USD 70) for each category for an initial term of five years. BTRC issued licences to thirteen individuals and joint venture companies.

Auctions to issue licences for international gateways (IGWs), interconnection exchanges (IXPs) and international internet gateways (IIGs) were also held.⁵

Another institutional development with significant policy implications was the separation of Bangladesh Submarine Cable Company Limited (BSCCL) from BTTB. Prior to this, BTTB had long functioned as the regulatory body, service provider and infrastructure owner all at the same time. This division is likely to begin a new era in the telecommunications sector.

Physical access to technology

Bangladesh got connected to SEA-ME-WE 4 at a cost of USD 35.1 million. However, it started with an obsolete model of one operator being responsible for all international

connectivity. Regulatory expert Rohan Samarajiva argued that in such a scenario, the regulatory agency should step in to ensure that a hybrid model is developed where BTTB builds capacity to reach major population or commercial centres and offers connectivity at non-discriminatory and cost-oriented terms to other operators (the “buy” option). He also argued that all operators be given the “build” option so that they can build a link to the cable station, co-locate equipment, etc. The offer of both build and buy options reduces the burden placed on regulation (Samarajiva, 2005).

Despite the availability of higher bandwidth, the growth of internet users was not significant in the last couple of years. Until last year, BTTB was the sole provider of bandwidth with a high operating cost. In February 2008, it reduced internet tariff charges by 20-40%, with an expectation that this would increase the internet usage level. According to the new tariff schedule, the monthly charge came down to about USD 10, from about USD 14. An annual lease for internet access up to two megabits per second (Mbps) came down to about USD 20,571 from its original ceiling of USD 27,428. But many experts believe that the price reduction is still not conducive to reaching a broader population with growing connectivity demand. The rate is still nine to ten times higher than the same bandwidth cost in India or Pakistan (Daily Star, 2008).

BTTB has already recovered the initial investment cost of setting up its submarine cable. Now there is a legitimate call from civil society for the government to drastically reduce internet charges to match other countries in South Asia. Some government bodies acknowledge the fact that the bandwidth prices fixed by BTTB are far too high and need to be adjusted. In a recent interview with *The Daily Star*, the chairman of BTRC, Manzurul Alam, called BTTB's bandwidth prices “abnormally high” and said they should come down to BDT 10,000 (USD 145) per megabit (Daily Star, 2008).

The government is also responding to growing bandwidth needs by allowing a second submarine cable to be developed. BTRC has already published guidelines, inviting proposals from private investors in this regard.

Locally relevant content

One interesting outcome of better connectivity is that it transforms the demand from connectivity to content. Bangladesh is at the transition of this development. As telecom institutions are being reorganised, and the market is expanding, an enabling environment is fuelling the appetite for content and services. This content need is being addressed by three separate trends:

- Availability of different content services via internet and cell phone connection
- Emergence of end-user innovation and user-generated content
- A push for localisation processes and standards.

5 www.btrc.gov.bd

Bangladesh's government is at the forefront of digital content publishing. The Digital Review of Asia Pacific 2007-2008 reports that the government, with support from the United Nations Development Programme (UNDP), has published many of its documents in digital format, both on the web (www.forms.gov.bd) and on CD-ROM. Most of these documents can now be downloaded free of charge. The downloadable documents include forms for passport applications, visa applications, citizenship, pensions, internet connections (through BTTB), birth registration, income tax returns and driving licences. However, out of 40 ministries listed on the government website (www.forms.gov.bd/eng/ByMinistry.aspx), only eight ministries have partially released their documents (Librero & Arinto, 2007).

Different non-governmental organisations (NGOs), depending on their areas of expertise, have produced digital content on development issues. The Development Research Network (D-Net),⁶ for example, has produced a number of CDs on livelihoods following a consultation with rural communities. The International Rice Research Institute (IRRI) in Bangladesh has developed a "Rice Knowledge Bank" – a digital service for those who provide information and support for farmers (such as NGOs), which is also the first comprehensive, digital rice-production library containing an ever-increasing wealth of information on training and rice production.⁷

Different mobile phone carriers are also developing or providing value-added content services using the mobile network. GrameenPhone, one of the largest cell phone networks in Bangladesh, provides a range of news updates in collaboration with different news agencies. Its "cell bazaar" initiative provides a mobile phone-based marketplace, where users can buy and sell any item using the cell phone. Banglalink has launched a different type of service for SSC (similar to O level examination) candidates. They are managing a short message service (SMS) based registration process where candidates with a Banglalink number can register for an online examination. AKTEL, another carrier, maintains a multimedia messaging service (MMS) greetings portal through which AKTEL subscribers can send MMS greetings to other AKTEL subscribers, even if their handsets are not MMS-enabled.⁸

The decentralised structure of the internet has encouraged the growth of user-generated content and collaborative publishing based on collective knowledge. Writing and maintaining blogs and participating in different social networking sites (like Facebook or LinkedIn) has become quite a common practice among the younger generation in Bangladesh. The Bangladesh Open Source Network (BDOSN),⁹ an informal network that seeks to popularise free and open source software (FOSS), has worked to facilitate Bengali

(also known as Bangla) content on Wikipedia. As of January 2008, Bengali Wikipedia¹⁰ had over 16,000 entries, one of the highest among the non-English versions of Wikipedia, and has been constantly referred to as a success story by the founder of Wikipedia.

Localisation has also gone a long way to make computing and the internet useful to the majority of the population. Bengali is spoken by 210 million people across the world, but no substantial local language application or standard was available before the late 1990s. Some Bengali fonts were developed for the Windows environment in a haphazard way, resulting in a lack of interoperability. As a result, keyboard mapping was different, which made localisation a cumbersome process. In 1998, Tanim Ahmed first solved the locale issue (bn.BD) and started a process of localising Linux.¹¹ Since then the major initiatives have been run by volunteers, although institutional initiatives have also entered the scene recently. The PAN Localization Project has helped establish the Center for Research on Bangla Language Processing at BRAC University in Bangladesh.¹² It has developed a 100,000-word list with tagging, verb and noun morphology, rich-text editor and spell-checker. A high-performance optical character recogniser (OCR) is also in the process of being developed.

Finally, the Right to Information Act creates legal entitlement for people to seek information and demand transparency in the activities of institutions, including government and non-governmental institutions. The government drafted the Act in 2002 but never placed it before parliament. The present government is trying to make some amendments and is planning to bring it out as an ordinance. Similar legislation has been enacted in 65 countries in Asia, including India and Pakistan.

Action steps

It is important that the government continues to play an effective regulatory role to balance the telecommunications sector both on the supply and demand side. It needs to encourage professionalism, competence and accountability, including in the incumbent operator.

It is essential for civil society organisations to understand and make themselves heard on issues of ICT and telecom regulation. Not too many organisations in Bangladesh have that capacity. Therefore capacity building on policy and regulatory issues may be an important step.

The priority in Bangladesh is moving from connectivity to content and services. As connectivity is improving, new content and services are likely to emerge. Civil society organisations need to be prepared to take part in this discussion and see what content and services can be developed to reflect the needs of the social development sector. ■

6 www.dnet-bangladesh.org/main.html

7 www.knowledgebank.irri.org/rkb/first.htm

8 mobiforge.com/blog/bangladesh-some-unique-services-telcos

9 www.bdosn.org

10 bn.wikipedia.org/wiki

11 bengalinux.org

12 www.bracuniversity.net/research/crbplp

References

- Asia-Pacific Development Information Programme: www.apdip.net
- Bangladesh Open Source Network (BDOSN): www.bdosn.org
- Bangladesh Telecommunication Regulatory Commission (BTRC): www.btrc.gov.bd
- Bengali Wikipedia: bn.wikipedia.org/wiki
- Center for Research on Bangla Language Processing: www.bracuniversity.net/research/crbp
- Daily Star (2008) 20-40pc internet tariff cut. *The Daily Star*, 7 February. Available at: www.thedailystar.net/story.php?nid=22295
- Development Research Network (D-Net): www.dnet-bangladesh.org/main.html
- International Rice Research Institute – Rice Knowledge Bank: www.knowledgebank.irri.org/rkb/first.htm
- Librero, F. and Arinto, P. (eds.) (2007) *Digital Review of Asia Pacific 2007-2008*. Sage/IDRC/Orbicom. Available at: www.idrc.ca/en/ev-116715-201-1-DO_TOPIC.html
- mobiForge: mobiforge.com
- Samarajiva, R. (2005) Making the most of submarine cable connectivity for Bangladesh. *The Daily Star*, 6 December. Available at: www.thedailystar.net/2005/12/06/d512061501104.htm
- Singh, R. and Raja, S. (2008) Regulating for the Next Billion. In Samarajiva, R. and Zainudeen, A. (eds.) *ICT Infrastructure in Emerging Asia: Policy and Regulatory Roadblocks*. Sage India/IDRC. Available at: www.idrc.ca/en/ev-117916-201-1-DO_TOPIC.html

GLOBAL INFORMATION SOCIETY WATCH 2008 is the second in a series of yearly reports critically covering the state of the information society from the perspectives of civil society organisations across the world.

GLOBAL INFORMATION SOCIETY WATCH or **GISWatch** has three interrelated goals:

- **Surveying** the state of information and communication technology (ICT) policy at the local and global levels
- **Encouraging** critical debate
- **Strengthening** networking and advocacy for a just, inclusive information society.

Each year the report focuses on a particular theme. **GISWatch 2008** *focuses on access to infrastructure* and includes several thematic reports dealing with key access issues, an analysis of where global institutions stand on the access debate, a report looking at the state of indicators and access, six regional reports and 38 country reports.

GISWatch 2008 is a joint initiative of the Association for Progressive Communications (APC), the Humanist Institute for Cooperation with Developing Countries (Hivos) and the Third World Institute (ITeM).

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2008 Report

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