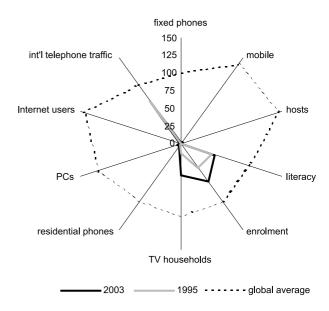# .bd

Bangladesh

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The year 2003 proved to be difficult; and stakeholders of the ICT industry, as they geared up to provide viable services to content producers, ISPs and consumers, had to accept the cold fact that Bangladesh has a long way to go in developing the necessary policy and legal framework to properly administer the country's public communications infrastructure. Although sales of consumer products such as mobile phones, desktop computers, printers, modems and networking equipment were observed to be increasing every month, the use of ICT remained confined to entertainment, voice communication, and basic Internet access for browsing and email. This was a period during which a number of positive steps were taken by developers, service providers and users to apply the new technologies in ways that would benefit the country. However, overall growth of the ICT industry was hampered during 2003 and 2004 by loose coordination and cooperation between private and public sector agencies, as well as a widely perceived lack of long-term vision at top-level policy-making bodies, despite ICT being declared a "thrust sector" in many forums.[1]

Industries

Internet and telecommunications services

The Bangladesh Telecommunications Regulatory Commission (BTRC) reported that there were 150 registered ISP licence holders ("licensed" often does not mean operational) at the end of 2003. Among these licensees, 14 were registered as "nationwide service providers". Regular ISPs and nationwide ISPs are distinguished by the level of licence fees and their business plans. BTRC does not currently provide information on the service areas of the active licensees, but interviews with key informants show that there are 49 operational ISPs in Dhaka, 14 in Chittagong, 6 in Sylhet, and only a handful in all the other districts combined. Most of these ISPs are hybrid service providers supplying dial-up, wireless and DSL services.

Apart from the ISPs, four registered VSAT hub operators had unveiled plans to provide satellite terminal and gateway services in December 2003, but a year later only one of them was open for business in this area providing services to financial institutions. At the same time, more than 20 data communications service providers in the country had registered with BTRC to operate using either their own data communications networks or microwave or fibre circuits leased from established GSM and CDMA mobile network operators.

BTRC also reported 67 VSAT systems registered in the country belonging to ISPs, software developers, and companies using the stations for internal communication. Apart from these registered stations, there are a number of unauthorised VSAT systems in use that are well hidden to avoid detection. The unauthorised VSATs are almost all used to provide illegal call-termination (into Bangladesh) or calling-card services for international calls (from Bangladesh to the world). Information about these unauthorised services can be easily obtained on the Web or at local grocery shops and supermarkets. It is obvious that many of these services are backed by well-managed business organisations that seem to be immune to the law or are tolerated by the authorities as they operate within a "grey area" of the telecommunications policy.

With this number of satellite ground assets, one would expect a large amount of data communication taking place, but the concept of sharing, or parallel use, of common infrastructure has so far not taken hold. It seems that BTRC has chosen largely to omit to follow up on its mandate to conduct inspections and, where necessary, to regulate against illegal usage, or to gather all the stakeholders for a roundtable discussion on updating and modernising rules relating to public communications services. It has instead issued a large number of licences to applicants without consideration for earlier entrants in the same sector or geographical area. The confusion of the role of BTRC is, however, understandable and probably will take more than a few years to resolve.

Perhaps the commission requires more stakeholder participation and a policy-shaping exercise to build consensus on the unique requirements of the Bangladesh ICT market.

In the area of public fixed-line telecommunications services, 37 licences have been approved for 18 companies and an additional 192 applications have been received. The successful applicants have been granted licences to operate in the South-East, South-West, North-East and North-West zones of the country. The Central Zone has been claimed as a monopoly by a foreign company based on a controversial last-minute agreement with the previous administration before it was replaced. Legal clarification and arbitration on the licence for the Central Zone is continuing.

In contrast to the confused state of the private sector, the public sector, dominated by the Bangladesh Telegraph and Telephone Board (BTTB), is much more organised. It is financially healthy in spite of regular predictions of its impending doom and claims of mismanagement. BTTB presented its digital telecommunications network to the public for the first time at a technical conference held at the Bangladesh University of Engineering and Technology in December 2003,[2] immediately before BTTB was awarded its own independent licence as a full telecommunications operator for fixed-line telephony.[3] The presentation showed that major fibre optic cables were already in service linking some of the metropolitan cities at speeds ranging from 155 Mbps to 2.5 Gbps. Domestic connectivity nationwide was possible through the BTTB telecommunications carrier network at speeds as low as 9.6 to 64 Kbps, and beyond that in increments of 64 Kbps up to 2 Mbps. ISDN and leased-line services were also available in the cities of Dhaka, Chittagong and Khulna and were being offered on demand.[4] The service areas for each fibre optic network are dispersed and isolated, and they rely upon microwave circuits for back-up facilities. There are, however, problems in accessing BTTB's PSTN facility, as policies for general and commercial access are not defined at present, and more importantly there is almost no provision for third-party (customer) equipment to be installed at any BTTB network exchange facility while retaining ownership of the equipment. These issues need to be resolved before customers will feel confident about depending on BTTB facilities.

BTTB took a big step towards establishing a large-scale infrastructure for digital data and voice communication in December 2003 by commissioning a VoIP telephony service for all its subscribers on selected international routes. Although VoIP services had been rendered by unauthorised service providers via VSAT stations as far back as 1999, regulations prohibited BTTB from upgrading its infrastructure to provide such services until approval was given by the Cabinet.[5] The charges for selected international calls fell from BDT 30–60 per minute to only BDT 7.50 (US$0.12) per minute when the Cabinet finally gave its consent at the end of 2003. A separate access number 012 has been commissioned so that subscribers can choose to dial through either regular voice circuits or cheaper VoIP circuits with inferior audio quality. This move caused some controversy,[6] as the VoIP service was launched without public notice, and it was obvious that BTTB considered itself above and beyond the scope of BTRC, which had not approved any VoIP services. Another important point that is often overlooked is that with VoIP it is more expensive to place a call between Dhaka and Chittagong, two major cities in Bangladesh, than it is to call New York from Dhaka. This is an unfortunate situation that stems from restrictions imposed by the Ministry of Finance (which regulates the income and expenditure of BTTB) and the Ministry of Posts and Telecommunications (which regulates BTTB and BTRC).

Internet exchange

No progress has been made in the establishment of a domestic peering point or Internet exchange, in spite of efforts by a number of parties who have either registered their intent with BTRC or convened public forums to sign on stakeholders as candidate subscribers. Greater efforts need to be made among the large number of ISPs so as to develop a consensus on this matter. The much publicised and anticipated Internet exchange project of the Sustainable Development Networking Programme Bangladesh (SDNP), hosted by the Bangladesh Institute of Development Studies and UNDP, had not been commissioned as of mid-2004 in spite of a very impressive budget for human resources and technical development. Of particular note to the ISP industry is that SDNP has expressed repeatedly that it will not be in a position to connect all the licensed ISPs and will only be donating equipment of its choice to selected ISPs. In the opinion of this author, who has played a significant role to date of building the Internet in Bangladesh, this decision of SDNP will eventually create a very large gap between those who are connected to "the" exchange and those who will have to raise funds and obtain equipment on their own to make this connection. This initiative will probably turn out to be counter-productive. Perhaps SDNP needs to consider why it wants to get into the "business" of being a telecommunications service provider if this alienates hundreds of thousands of users.

Software

Commercial software developers in the country now seem ready to accept the fact that they need to first set up a viable domestic software development industry before they can aim for the international market. This was evident during the marketing mission they undertook to COMDEX 2003. The mission was co-sponsored by the Export Promotion Bureau and the Bangladesh Association of Software and Information Services. It confirmed the inadequacy of just providing ICT

education to large numbers of students without generating jobs for them when they graduate, forcing them to seek employment in other countries.

Online content

There has been no significant increase in the online presence of Bangladeshi vendors, service providers and service organisations. The exception is in the number of mainstream English and Bengali-language newspapers[7] which are now available over the Web via their online editions. The extended absence of a standard code for the Bengali font poses continuing challenges to content providers working in the national language. Software developers have opted to tackle this problem by creating more Windows-based font-input translation capabilities to complement the long-standing support for Bengali provided by Apple Macintosh computers for well over a decade now.

Another exception is the increase in the number of small and medium-sized companies registering their own domain names, initially for email and subsequently for establishing websites. It is difficult to determine the number of websites registered within Bangladesh owing to the absence of a consistent top-level domain-naming scheme in the country and a common registrar. It is also virtually impossible to determine the number of websites published by Bangladeshi companies, organisations and individuals that are hosted overseas by international service providers. A simple registration service is being offered by BTTB for organisations choosing to adopt a ".bd" top-level domain, but there is controversy over the structure of second-level domains and it has been recently divulged that the infrastructure for the top-level domain name records maintained by BTTB is fragile and unsupported.[8]

Disabling policies

Discouraging exports

It is puzzling that the issue of foreign currency revenue is rarely discussed by policy-making bodies, even though current regulations in this area discourage ICT exports from Bangladesh. Presently, Bangladesh Bank, the country's central bank, routinely deducts 10 percent of foreign currency remittances that ICT companies receive from abroad as payment for their exports. The deduction is for "royalty" payment to the government and is on top of applicable income taxes payable by these companies. Additionally, Bangladesh Bank requires that the balance of the remittances be converted into the local currency and deposited in local banks. The National Board of Revenue does not allow local ICT companies to maintain foreign currency accounts, make use of foreign currency credit cards, or maintain international foreign currency bank accounts for depositing their export earnings. These antiquated and draconian regulations are discouraging and restricting the efforts of local exporters.

Bangladesh Bank allows the 10 percent royalty deduction to be waived for remittances received "for software export" and "for IT export". However, companies must use these exact terms to very carefully describe their export earnings at the time their foreign remittances are received, otherwise the deduction is automatically made and will not be refunded. The use of other terms, such as "for software export services" or "for IT-enabled services", is not accepted by the bank and will lead to the deduction being made.

Discouraging R&D and specialised engineering

Existing regulations for importation of components and equipment discourage ICT manufacturing and R&D efforts in the country. The National Board of Revenue, part of the Ministry of Finance, sets the customs tariffs and revenue targets and controls all imports into Bangladesh in collaboration with the Ministry of Industries, which defines the Import and Export Policy of Bangladesh. The policy was obviously put in place to protect local industries by selectively applying tariffs on various categories of components and equipment according to its Harmonised Standard Codes. It imposes additional fines and taxes of up to 41 percent for small shipments of goods. There are also fines for not purchasing through letters of credit and more fines for not using a pre-shipment inspection agency. It is obvious that in the implementation of the policy the government has never considered the plight of small, skills-based ICT R&D workgroups as well as developers who need just-in-time shipment of electronics and software components. What is also evident is that the government's Import and Export Policy for 2004–2005 and 2005–2006 has discouraged R&D-oriented engineering firms from contributing to the development of the ICT sector in Bangladesh. This in turn has alienated ICT talent in the country, who are migrating in large numbers to any country that will employ them.

There is an obvious gap between the stated goals of the government to promote ICT as a thrust sector and the policies currently followed. Some time may have to pass before the goals and policies may converge.

Notes

1. The Communications Initiative, ICT Policy of Bangladesh, 2002, *http://www.comminit.com/ctrends2002/sld-6807.html*.

2. Md. Yousuf Niaz & A.K.M. Habibur Rahman, Data and Internet Infrastructure of Bangladesh: Role of BTTB, in *Proceedings of the International Workshop on Distributed Internet Infrastructure for Education and Research*, Bangladesh University of Engineering and Technology, Dhaka, 30 December 2003–2 January 2004.

3. According to the provisions of the Telecommunications Policy 2001, BTTB was to be provided with a "grandfather protection" clause for 12 months after the founding of BTRC, but the process was not completed owing to many factors, and the grace period expired on 31 January 2003.

4. Such claims of BTTB are often met with valid scepticism by commercial customers, who often comment that it may be more accurate to add "as long as 'speed money' is paid to local technicians and technical problems don't happen on a Thursday, Friday or Saturday". Typically, BTTB repair crews work government business days, which are Sunday to Thursday. Urgent repairs after normal work hours are not typically provided to subscribers.

5. S. Khan, Bangladesh Rings in Low Tariffs, High Profits with Net Telephony, 12 November 2003, *http://www.digital opportunity.org*.

6. T. Ahmed, BTTB Now an Illegal Operator, 14 January 2004, *http://www.newagebd.com/jan2nd04/140104/front.html*.

7. *http://www.onlinenewspapers.com/banglade.htm*. AllYouCanRead.com, Bangladesh Newspapers, 2004, *http://www.allyoucanread.com/newspapers.asp?id=C33*.

8. M. Masroor Ali, Bangladesh Country-Code Top-Level Domain (.bd) for Internet and Related Issues, paper presented at the International Workshop on Distributed Internet Infrastructure for Education and Research, Bangladesh University of Engineering and Technology, Dhaka, 30 December 2003–2 January 2004.