7.6 The History and Evolution of the Internet in Bangladesh

2024.8.25rev2025.3.20

Hakikur Rahman

Introduction

The way people communicate, obtain information, and do business has been shaped by the Internet, which has become an essential component of contemporary society. The Internet has had a revolutionary impact in Bangladesh, impacting not only education but also commerce, healthcare, and governance. The history and development of the Internet in Bangladesh are explored in this essay, which follows its path from the earliest days of connectivity to the current period of broad digital usage.

Early Beginnings: The 1990s

The history of the Internet in Bangladesh dates back to the early 1990s, a period characterized by limited connectivity and nascent digital infrastructure. The first significant milestone was achieved in 1996 when **Drik** Picture Library, a multimedia organization founded by **Dr Shahidul** Alam, became the first Internet Service Provider (ISP) in the country. Drik's connection was primarily used for email communication and accessing rudimentary websites, catering to a small number of users, mainly in the capital city of Dhaka.

During this period, the Internet was a luxury, available only to a select group of individuals and organizations. The high cost of connectivity, coupled with the limited availability of computers, meant that the Internet was far from being a mass phenomenon. Despite these challenges, the introduction of the Internet in Bangladesh marked the beginning of a new era, laying the foundation for future developments.

The Expansion Phase: Late 1990s to Early 2000s

In Bangladesh, Internet services started to gradually grow in the late 1990s and early 2000s. The government started to take a more active role in promoting digital connectivity after realizing how the Internet could spur economic growth and development. The Bangladesh Telecommunication Regulatory Commission (BTRC) was founded by the government in 1996 to regulate the Internet and other telecommunications services.

During this period, several ISPs entered the market, leading to increased competition and a reduction in connectivity costs. The availability of dial-up connections expanded beyond Dhaka, reaching other major cities such as Chittagong, Sylhet, and Khulna. The Internet user base, though still small, began to grow as more people gained access to online services.

One of the significant developments of this era was the launch of Grameen Cybernet in 1997, a subsidiary of Grameen Telecom. Grameen Cybernet played a pivotal role in popularizing the Internet in Bangladesh by offering affordable dial-up services to a broader audience. The company also initiated efforts to promote digital literacy, organizing workshops and training sessions to familiarize people with the Internet and its potential benefits.

The Influence of SDNP Bangladesh: 1999-2008

The UNDP-funded Sustainable Development Networking Programme (SDNP) Bangladesh was significant in influencing the development of the Internet in the nation at this time. Between 1999 and 2008, SDNP played a key role in the creation of a mesh Wi-Fi network based on VSAT technology, which linked numerous Bangladeshi universities and districts. This network closed the digital divide and created the foundation for sustainable development by greatly improving Internet access in underserved areas.

SDNP also focused on capacity building and raising awareness about the potential of the Internet to support development goals. By connecting educational institutions and government offices, SDNP facilitated the exchange of knowledge and collaboration, crucial for fostering innovation and supporting the country’s broader development objectives. The impact of SDNP on the Internet landscape in Bangladesh remains a key chapter in the country's digital history.

The Broadband Revolution: Mid-2000s

The mid-2000s marked a turning point in the evolution of the Internet in Bangladesh with the introduction of broadband services. Until this period, dial-up connections were the primary means of accessing the Internet, but they were slow and often unreliable. The advent of broadband technology revolutionized Internet connectivity, offering faster speeds and more stable connections.

In 2005, the government of Bangladesh launched the National Internet Exchange of Bangladesh (NIXB) to facilitate local Internet traffic and reduce dependency on

international bandwidth. This initiative was instrumental in improving the quality of Internet services and lowering costs for end-users. The same year saw the introduction of Digital Subscriber Line (DSL) services, which provided high-speed Internet to homes and businesses.

Bangladesh's Internet user base has grown dramatically as a result of the broadband revolution. While internet cafes, which had gained popularity in the late 1990s, were still thriving, more and more individuals were installing broadband connections in their homes. Broadband adoption by enterprises, government agencies, and educational institutions has increased societal connectivity.

The Role of BDIX: 2004-Present

A significant milestone in the development of Bangladesh's Internet infrastructure was the establishment of the Bangladesh Internet Exchange (BDIX) in 2004, initiated by Dr. Hakikur Rahman. BDIX was created to facilitate local Internet traffic exchange, reducing latency and improving the efficiency of data transfer within the country. By enabling local ISPs to exchange traffic directly, BDIX reduced reliance on international routes, lowering costs and enhancing the quality of Internet services.

BDIX has made a significant contribution to Bangladesh's Internet ecosystem. In addition to supporting digital entrepreneurship and the development of local content, it has made broadband and mobile Internet service expansion easier. The exchange is still essential to the nation's digital infrastructure because it sustains a strong and stable Internet environment.

The Mobile Internet Boom: Late 2000s to Early 2010s

The late 2000s to early 2010s witnessed another significant transformation in the Internet landscape of Bangladesh: the mobile Internet boom. The widespread adoption of mobile phones, coupled with the introduction of mobile Internet services, brought the Internet to millions of people who had previously been excluded from the digital world.

In 2008, Grameenphone, the largest mobile operator in Bangladesh, launched its mobile Internet service, offering affordable data packages to its customers. This move was followed by other mobile operators, including Banglalink, Robi, and Airtel, who also began offering mobile Internet services. The availability of mobile

Internet at affordable rates led to a rapid increase in Internet penetration across the country.

2013 saw the introduction of 3G services, which was a major turning point in the mobile Internet revolution. Through increased network coverage and better data rates, 3G technology allowed consumers to access a variety of internet services, such as social media, e-commerce, and video streaming. In order to ensure that even isolated villages could benefit from the Internet, the government worked with cell operators to expand 3G coverage to rural areas.

The mobile Internet boom had a profound impact on various sectors in Bangladesh. E-commerce platforms such as Daraz and AjkerDeal gained popularity, providing people with convenient access to a wide range of products and services. Social media platforms like Facebook and Twitter became integral to people's lives, facilitating communication, information sharing, and social networking. Additionally, mobile banking services like bKash revolutionized financial transactions, allowing people to send and receive money, pay bills, and make purchases through their mobile phones.

The Rise of Digital Bangladesh: Mid-2010s to Present

The mid-2010s marked the beginning of a new era in the history of the Internet in Bangladesh, characterized by the government's ambitious vision of building a "Digital Bangladesh." This vision, outlined in the government's "Vision 2021" plan, aimed to leverage the power of digital technology to drive economic growth, improve governance, and enhance the quality of life for all citizens.

One of the key components of the Digital Bangladesh initiative was the expansion of Internet infrastructure across the country. The government invested heavily in building a robust digital infrastructure, including the deployment of fiber-optic networks, the expansion of 3G and 4G coverage, and the establishment of digital hubs and innovation centers. These efforts were complemented by initiatives to promote digital literacy, with the goal of ensuring that all citizens could benefit from the opportunities offered by the Internet.

E-government services proliferated along with Digital Bangladesh, facilitating citizens' internet access to government services. A number of internet portals were introduced by the government, such as the National Portal of Bangladesh, which offered access to a multitude of services such as property records, tax filing, and

birth registration. These e-government projects decreased corruption and raised openness in addition to increasing the effectiveness of public services.

The education sector was another beneficiary of the Digital Bangladesh initiative. The government promoted the use of digital tools and online platforms to enhance the quality of education and expand access to learning opportunities. The launch of initiatives such as the "Digital Classroom" and "Shikkhok Batayan" (Teacher's Portal) provided teachers and students with access to a wealth of educational resources, including e-books, video lectures, and interactive learning materials.

In addition to e-government and education, the Digital Bangladesh initiative also focused on promoting digital entrepreneurship and innovation. The government established several tech parks and innovation centers to support startups and encourage the development of digital solutions. These efforts were complemented by initiatives to promote digital skills training, with the goal of creating a digitally literate workforce capable of driving the country's digital economy.

The Role of Bangladesh Computer Council

The **Bangladesh Computer Council (BCC)** has played a pivotal role in the evolution and expansion of the internet in Bangladesh. Established in 1983, the BCC operates under the Ministry of Posts, Telecommunications, and Information Technology. Its contributions can be outlined in several key areas:

1. Policy and Infrastructure Development

- **Early Internet Advocacy:** The BCC was instrumental in advocating for the introduction and expansion of internet services in Bangladesh. It worked alongside the government and private sector to establish internet connectivity, which was in its infancy in the 1990s.
- **Infrastructure Projects:** BCC has overseen various IT infrastructure projects, including the establishment of the country’s first national data center. The council has been involved in major initiatives such as the development of the Bangladesh National Digital Architecture (BNDA) and the introduction of high-speed internet connectivity across government institutions and public service offices.

2. Bangladesh Internet Exchange (BDIX)

- **Supporting BDIX:** BCC supported the establishment of the **Bangladesh Internet Exchange (BDIX)** in 2004, which allowed local Internet Service Providers (ISPs) to exchange data among themselves within the country. This reduced latency, enhanced data speeds, and significantly improved the overall internet experience for users. BDIX played a crucial role in making local internet access faster and more efficient, and the BCC's backing helped strengthen this initiative.

3. Capacity Building and Digital Literacy

- **Skill Development Programs:** The BCC has been responsible for numerous IT education and training programs, aiming to improve digital literacy across the country. It has launched initiatives such as the **Learning and Earning Development Project** (LEDP), which aims to create skilled human resources for the IT and internet sectors, enhancing the workforce's capacity to drive Bangladesh's digital economy.
- **ICT Education Expansion:** By promoting ICT education, the BCC contributed to growing a workforce that could not only use the internet but also develop and maintain the infrastructure necessary for its expansion.

4. Promotion of Digital Bangladesh Vision

- **Digital Bangladesh Vision 2021:** The BCC has been central to the government's **Digital Bangladesh Vision 2021**, aimed at transforming Bangladesh into a digitally advanced country by modernizing its telecommunications, IT, and internet infrastructure. The BCC's role includes expanding internet access to rural areas, ensuring cybersecurity, and enhancing e-governance systems, contributing to the broader goal of an inclusive digital society.

5. Collaborations and International Partnerships

- **Global Collaborations:** BCC has facilitated partnerships with international organizations to modernize the internet infrastructure. Through these collaborations, Bangladesh has gained access to technological resources, knowledge exchange, and financial support for developing the internet ecosystem.
- **South Asia Subregional Economic Cooperation (SASEC):** BCC participated in regional connectivity projects such as SASEC, which helped improve cross-border internet traffic and expanded Bangladesh's digital integration with neighboring countries.

6. Cybersecurity and Governance

- **National Cybersecurity Framework:** In recent years, BCC has taken a leading role in developing the **Bangladesh National Cybersecurity Framework** to ensure that the rapid expansion of internet usage is accompanied by adequate protection against cyber threats. This effort helps secure Bangladesh's growing internet ecosystem and builds trust in online services.

Role of Internet Service Providers Association of Bangladesh (ISPAB)

The Internet Service Providers Association of Bangladesh (ISPAB) has played a crucial role in the development and management of internet services in Bangladesh, shaping the digital landscape significantly. Here's a breakdown of ISPAB's key contributions:

1. Advocacy for Internet Service Providers (ISPs)
   - Policy Representation: ISPAB serves as the collective voice of ISPs in Bangladesh, advocating for favorable policies, regulations, and business environments. It represents ISPs' interests to the government, regulatory bodies, and other stakeholders, ensuring that the industry's concerns are addressed in decisions regarding internet pricing, bandwidth allocation, and licensing.
   - Regulatory Coordination: ISPAB collaborates closely with the Bangladesh Telecommunication Regulatory Commission (BTRC) to ensure a level playing field for ISPs in terms of competition, preventing monopolistic practices, and safeguarding the rights of smaller ISPs in rural and semi-urban areas.

2. Development of Internet Infrastructure
   - Promoting Local Peering: ISPAB has been instrumental in the promotion and growth of the Bangladesh Internet Exchange (BDIX), which is crucial for efficient data routing within the country. By encouraging local ISPs to connect to BDIX, ISPAB has helped reduce bandwidth costs and improved internet speeds, which has significantly benefited local users.
   - Infrastructure Improvement: ISPAB has played an active role in the expansion of internet infrastructure across Bangladesh. This includes working with stakeholders to improve fiber optic networks, ensuring reliable internet services, and enhancing connectivity in underserved regions. Their initiatives support both urban and rural internet users, contributing to national digital inclusion efforts.

3. Industry Standards and Best Practices

- Setting Industry Standards: ISPAB helps ensure that ISPs across the country adhere to international standards of internet service quality, data security, and customer support. The association organizes workshops, seminars, and training programs to promote technical skills, cybersecurity practices, and emerging technologies among its members.
- Capacity Building: By sharing knowledge and best practices, ISPAB helps raise the technical standards of the internet service industry in Bangladesh. This includes addressing challenges like infrastructure bottlenecks, service downtimes, and the adoption of next-generation technologies like fiber-to-the-home (FTTH) and 5G.

4. Collaboration with Government Initiatives
- Supporting Digital Bangladesh: ISPAB has been a key partner in the government's Digital Bangladesh initiative, which seeks to expand internet access and improve digital infrastructure across the country. Through its efforts, ISPAB has supported projects that aim to increase broadband penetration, especially in rural and semi-urban areas.
- National Internet Policy: ISPAB has been involved in the development and refinement of national internet policies that directly impact ISPs and users. Their input helps ensure that regulations are balanced, fostering both competition and innovation while supporting the growth of internet-related services.

5. Crisis Management and Advocacy
- Handling Internet Disruptions: ISPAB plays a critical role in managing internet service disruptions due to natural disasters or technical faults. They coordinate between ISPs and other stakeholders to ensure minimal downtime and timely restoration of services, which is crucial in maintaining connectivity during emergencies.
- Advocating for Fair Pricing: ISPAB frequently negotiates with government authorities on pricing issues related to international bandwidth costs and taxes, ensuring that internet access remains affordable for both providers and end-users.

6. Collaboration with International Entities
- Global Partnerships: ISPAB maintains relationships with international organizations and stakeholders to stay updated on global trends in internet services and infrastructure development. These collaborations often help Bangladeshi ISPs adopt the latest technologies and standards, ensuring they remain competitive on a global scale.

ISPAB's role in the internet evolution in Bangladesh has been fundamental in establishing an affordable, reliable, and growing internet infrastructure. By

advocating for ISPs and collaborating on national policies, ISPAB has helped shape the internet landscape to meet the needs of millions of users in the country.

Challenges and Recent Developments: Internet Shutdowns and the Student-Driven Digital Revolution

Despite the significant progress made in the evolution of the Internet in Bangladesh, the country has faced challenges, particularly in the context of political unrest. A notable development in recent years has been the government's use of Internet shutdowns as a means of controlling information flow during periods of political tension and protests.

For instance, during the student-led movements demanding road safety reforms and fair education policies, the government imposed Internet shutdowns to curb the spread of information and disrupt the organization of protests. Despite these efforts, the movements continued to gain momentum, underscoring the resilience of the participants and the limitations of such measures in the digital age.

These events highlighted the critical role of the Internet as a platform for civic engagement and social change in Bangladesh.

Footnote: Future Aspects of the Internet in Bangladesh for Sustainable Development

As Bangladesh continues to develop its digital infrastructure, the Internet is poised to play an increasingly critical role in achieving the country’s sustainable development goals (SDGs). The government's continued investment in expanding broadband and mobile Internet access, particularly in rural areas, will be essential in ensuring that the benefits of digital technology reach all segments of society. Future developments may include the deployment of 5G networks, which will provide even faster and more reliable Internet access, enabling the growth of advanced technologies such as the Internet of Things (IoT), artificial intelligence (AI), and smart cities.

The Internet will play a major role in enabling sustainable development in fields including governance, healthcare, education, and agriculture. While telemedicine and digital health records will enhance healthcare results and accessibility, e-learning platforms and virtual classrooms will aid in closing the achievement gap in education. By giving farmers access to up-to-date information on markets, weather, and best practices, the Internet can boost agricultural productivity and

resilience. Initiatives for e-government will keep advancing accountability, openness, and citizen participation, which will help to create more inclusive and successful governance.

However, challenges remain, including the need to address the digital divide, ensure cybersecurity, and protect citizens' digital rights. The success of future Internet initiatives will depend on a balanced approach that promotes innovation while safeguarding privacy and security. By focusing on these areas, Bangladesh can harness the full potential of the Internet to support sustainable development and improve the quality of life for its citizens.