

The Internet: Challenges, Opportunities and Prospects

বিশ্ব টেলিযোগায়োগ দিবস-২০০১



BANGLADESH TELEGRAPH & TELEPHONE BOARD

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SPECIAL SUPPLEMENT



Satellite Communications Business in Asia Pacific Region and Launching of Bangladesh's own Satellite

ENGR SAT M BADRUL HOQUE

Satellite is one of the major means used all over the world for communications and broadcasting. About 50 satellite operators engaged in this business invest billions of dollars to operate and maintain the existing satellite systems and to implement the new projects to cater for ever increasing capacity in this field. Satellite service providers raised an estimated \$11.4 billion in 1999 from banks and public markets. At the close of 1999, they negotiated bonds and debt worth another \$4.8 billion for placement during 2000. Altogether satellite operators expect to invest more than \$65.0 billion in the space segment over the next 10 years and they will still have over \$40.0 billion to raise. In this backdrop, Euroconsult (a leading international consulting firm in the field of satellite communications and broadcasting business), with the support of world's leading satellite service providers and manufacturers, organised a seminar entitled "World Summit on Financing for Satellite Communications and Broadcasting" at the Intercontinental Hotel in Paris on August 31 and September 1, 2000 to review the state of the satellite projects and to discuss the financing of the new deals. The author of this article as a member of the Bangladesh Delegation attended the seminar with the purpose of acquiring knowledge in the form of sharing other countries' experience in satellite launching, transfer of technology, financing and exchange of information that might be used in implementing a project for launching a communication geo-stationary satellite of Bangladesh.

Knowledge gained in the seminar: From the papers presented in the seminar and by joint and individual discussions with the participating consultants, satellite operators, service providers and manufacturers, it has been made clear to the author that before launching a communication geo-stationary satellite, apart from having a space slot allotted by ITU the points that are to be looked into are: (a) a comprehensive business plan incorporating committed and potential uses of the satellite transponders, (b) size of the satellite in terms of number of transponders in the light of the prospective use, (c) coverage area of the satellite in terms of global, regional and spot beams to satisfy the customers, (d) power and frequency band to be used for interference-free communication, and (e) types of services to be provided. In order to make a communication geo-stationary satellite commercially viable, the consultants emphasized that a pre-launch market survey is mandatory to assess how much and by whom the satellite transponders will be used. For this, only assumptions will not do, rather commitments of transponder uses are required in advance so that after-launch utilization and thereby return on investment are guaranteed. To make this essential survey, history and trend

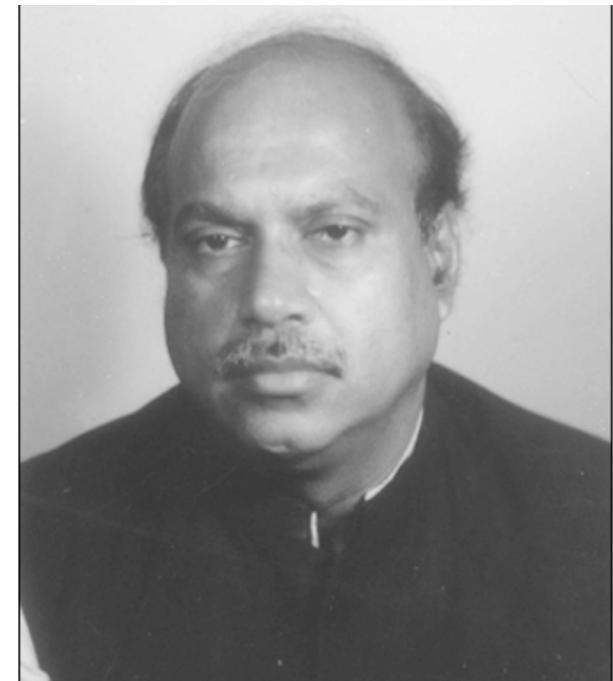
of communication through satellite in the region where Bangladesh satellite may be used should be taken into consideration. A brief description in this regard as collected from Euroconsult is enumerated hereafter.

Satellite market is Asia Pacific region since 1965: The first communications satellite to serve the Asia-Pacific region, Intelsat 202, was ordered in 1965 and launched in 1967. Since then, the region's importance in the global satellite market has grown steadily, and accelerated at an unprecedented pace from the late 1980s, driven by the sudden development of television broadcasting and the investments committed by Asian nations to the modernisation of their telecommunications networks. As in

other satellite markets, three generations became apparent in the Asia-Pacific region. The first generation encompassed 19 satellites ordered from 1965-79 and launched from 1967-85, with a total value of \$1,403 million. This first group provided the minimum connectivity required to support international telephony and some of the traffic carried by the principal and most underserved backbone links of island nations such as Indonesia and the Philippines, or the Australian outback. It was dominated by INTELSAT, which ordered 14 spacecraft for deployment over the region during that period, but also saw the emergence of its first two domestic systems: Indonesia's Palapa A and Japan's BS-1 direct broadcast satellite.

The second generation ran approximately from 1980-90; the market expanded markedly over that period, with 34 satellites ordered for a total value of \$3,945 million and launched over 1983-92. This period saw Australia acquire the region's second domestic system and two competing private systems appear in Japan. Another important development was the launch of Asiasat-1, which brought the concept of a pan-Asian operator and trans-border television into Asia.

Future prospects and trends: The Asia-Pacific market's third-generation satellite were ordered from about 1991, and are scheduled to be launched through 2004. Early planning has already begun for the launch of replacement satellites such as the Optus C and Koreasat 2 series from about 2003, which may mark the beginning of a fourth generation. Altogether, a total of 86-109 satellites were ordered from 1991-2000 and launched from 1992 and are to be launched through 2005, with a total estimated value of \$7.0-10.15 billion (at 1993 prices, or 1.3-1.9 times as much as that of the first two generations combined). The upper estimate assumes that all existing or planned domestic and regional systems will be replenished, and that one new regional system and three new domestic systems will appear. Indigenous Asia-Pacific operators, other than INTELSAT, Inmarsat and Panamsat, are expected to account for 75-94 satellites, with a combined value of \$5.2-9.7 billion, or 74-95% of the total market. Though these operators play a part in the decisions of INTELSAT or Inmarsat, they purchase shorter series and require a different marketing approach. This current phase of the market's evolution is driven by several trends which all point to its rapid maturity:



MESSAGE

I am pleased to know that like other member countries of ITU Bangladesh is going to celebrate "World Telecommunication Day" on May 17, 2001 to commemorate the founding of ITU under auspices of both Ministry of Post & Telecommunications and Bangladesh Telegraph and Telephone Board. "The Internet: challenges, opportunities and prospects", the theme of this year, highlights the importance of Internet in present world.

Internet service has profound effect on our life and work. It facilitates us to work more efficiently and offers greater freedom in telecommunication. In fact, it is reshaping our life style. In the last couple of years the growth rate of Internet users was tremendous and it is expected that this rate will continue worldwide.

I believe that progressive liberalisation can provide greater opportunities for improving access to telecommunications services. Internet service sector is liberalised in Bangladesh since the beginning of the service in the country. Along with other facilities, VSAT facility also was liberalised for private operators. As a result, many Internet service providers in private sector are working in Bangladesh. Bangladesh T&T Board is also developing its telecommunication network and facilities to deploy internet infrastructure throughout the country.

With the view that congenial competition prevails as the determinant factor of quality product with reasonable price, the present government is committed to ensure internet services to the common people.

I wish the World Telecommunication Day a success.

Khoda Hafez
Joi Bangla Joi Bangabandhu

Mohammad Nasim

Minister
Ministry of Post & Telecommunications and Home Affairs

information and learn. Do you agree? Think again. Internet users account for only five per cent of the world's population. 85% of them are in developed countries where 90% of all Internet hosts are also located. So there is a real problem.

What can the Internet do for those regions of the world that have only limited access to information and communication technologies? When resources are already stretched to the limit, can investment in the Internet be

from markets, difficulty in accessing export distribution networks could become things of the past. The Internet also offers the hope of delivering basic services such as health and education more efficiently by allowing people to follow lectures by experts and participate in a learning exchange from their very own homes and communities.

To make this happen policy-makers, businesses, and even users will have to find ways to rise to a number of challenges.

The very first challenge is to expand access to the Internet at affordable prices. Today, the high cost of the service in many countries remains one of the main barriers to Internet diffusion in addition to that of the shortage of phone lines.

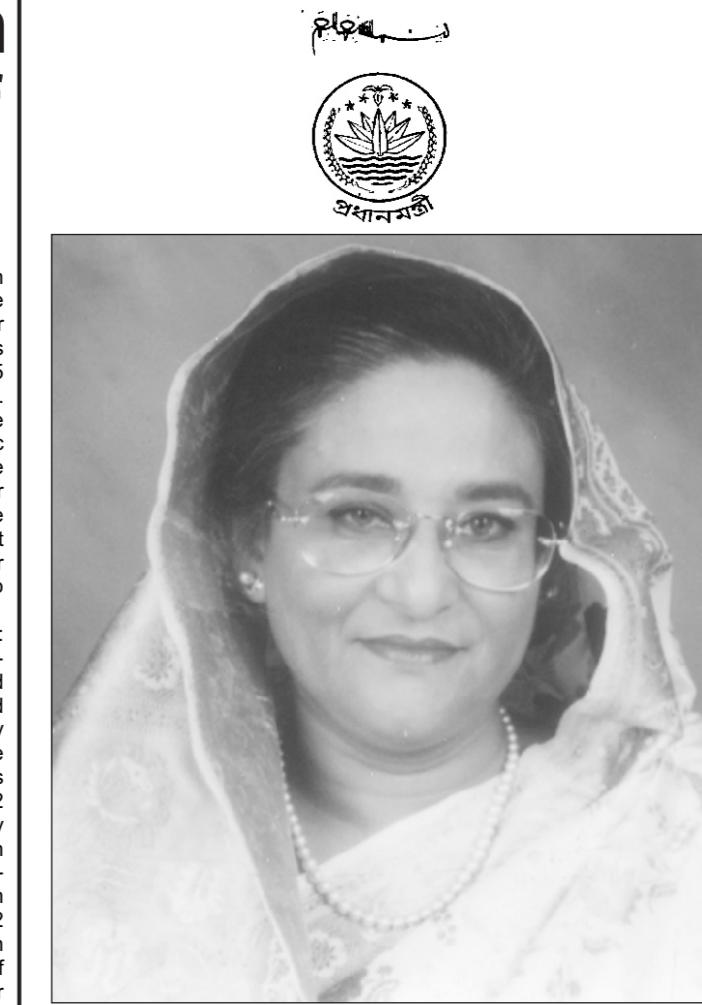
To reduce this cost, policymakers need to determine how to price bandwidth to spur Internet uptake, how to deploy infrastructure cost-effectively and to decide what technologies are best suited to network expansion. Legislative or regulatory measures

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Each year on 17 May, the ITU celebrates World Telecommunication Day to commemorate its founding in Paris in 1865. This year, the theme highlights the promises and the challenges of the Internet.

The Internet has not only transformed the way we communicate, but it has also dramatically changed the way we work, do business, interact, play, seek

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MESSAGE

I am happy to learn that "World Telecommunication Day" is being observed in Bangladesh. At the threshold of the new millennium all the nations of the world have become true neighbours following tremendous development in telecommunication.

Bangladesh Awami League is committed to carry the facilities of modern telecommunication to the doorsteps of the people living at the grassroots level. We have already introduced digital telephone in 36 districts of the country. We have also taken further initiative to establish digital telephone exchange in 93 upazilas. People are now using mobile telephone even in a remote village of the country.

As a new technology in telecommunication, the use of internet has also experienced an unprecedented growth in Bangladesh. Our government is sustaining efforts to develop telecommunication networks to deploy internet infrastructure cost-effectively. I also encourage the private sector to increase initiative to provide better and updated internet services to the people of Bangladesh.

I wish the "World Telecommunication Day" a grand success.

Joi Bangla, Joi Bangabandhu
May Bangladesh Live Forever

Shameem Hasna

Prime Minister
Government of the People's Republic of Bangladesh

MESSAGE

Bangladesh, along with other member countries of the International Telecommunication Union, is observing the "World Telecommunication Day" on the 17th of May, 2001.

The theme of the "World Telecommunication Day" of this year is "The Internet: challenges, opportunities and prospects." With the evolution of telecommunication based technologies, Internet has played a vital role in socio-economic development. The new millennium is the era of super-communication and Internet is obviously one of the key instruments for global communication. In the information age, countries that do not have easy access to information networks will not grow, no matter how rich their natural endowments are. So it is high time to update our internet infrastructure to make it available to common people at affordable price.

Bangladesh has continuously been endeavouring to develop modern telecommunication network to provide better service to people. We hope that, with further development of the telecommunication system in Bangladesh within the next few years, both service and accessibility will improve throughout the country.

I wish the day a great success.

Nazmul Ahsan Chowdhury
Secretary
Ministry of Post & Telecommunications

the very first instance it became very popular here like other countries of the world. Now a days internet is considered as one of the key instruments for global communication. The internet has made a revolution in the way we communicate. Also it has dramatically changed the way we work, do business, interact seek information etc. But in Bangladesh, internet is still nascent. Internet users account for only 5 percent of the world's population of which 85% are in developed countries. Also 90% of all internet hosts are located in developed countries. In this context it is easy to imagine that internet penetration very poor in developing countries.

Bangladesh T & T Board is providing internet service in the country. At present it is provided at Dhaka, Chittagong, Khulna, Sylhet and Bogra. Besides this, many private enterprises are providing Internet services as ISP through VSAT. Bangladesh government has liberalised the sector for rapid

growth and development.

BTTB is currently in the process of completing an under sea submarine cable system. Once installed, this high bandwidth fiber optic connection to the outside world significantly increase & care our Internet traffic making internet affordable to all. Moreover, as the ISP's are scattered all over the city, most of the dial in Internet access involves a number of local exchanges, tandem exchange, and the trunk lines, causing congestion in the telephone network. BTTB with its limited resources is trying to come forward to extend its cooperation in the country's internet system that will facilitate the users to be connected to any one at anytime, anywhere in the world.

I wish all the success of World Telecommunication Day, 2001.

AFM NH Choudhury
Chairman
Bangladesh T&T Board



MESSAGE

I am happy to know that Bangladesh is going to celebrate the 'World Telecommunication Day' this year, like other member countries of the ITU, on the theme of the day 'The Internet: challenges, opportunities and prospects.'

The Internet system is playing a significant role in our economy and socio-cultural environment by facilitating people connectivity and speeding business decision. Internet service today has changed our life styles and has accelerated our development activities, specially in the field of education, business, health, research, journalism etc. Understanding the versatility of this growing technology in the present fast moving world, MOPT has already opened the internet services in Bangladesh, through private ownership during the present government. Bangladesh T&T Board is providing the service also.

Still the high cost of the service in addition to that of the shortage of phone lines remains as one of the main barriers to internet diffusion. Various development programmes already taken in telecom sector will be helpful to expand access to the internet at affordable prices.

Today, with the celebration of ITU day in Bangladesh, it is my hope that internet system in Bangladesh will make further effort to come up with cheaper and variety of services keeping pace with the information revolution, to link the people anywhere, anytime.

I wish every success in observing the day.

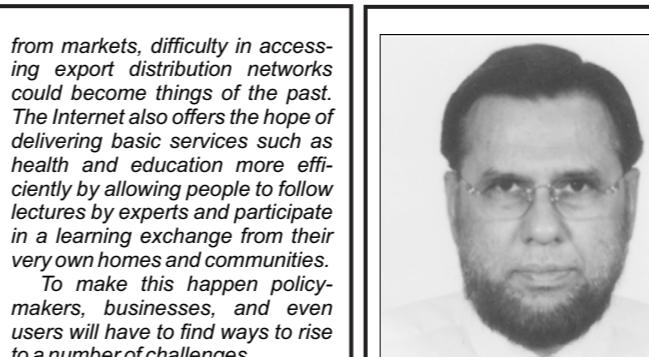
Md. Abdur Rouf Chowdhury
State Minister
Ministry of Post and Telecommunications



MESSAGE

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On the 17th of May, 2001, the World Telecommunication Day is being observed in Bangladesh like other member countries of the International Telecommunication Union. "The Internet: challenges, opportunities and prospects" is the theme of the day this year.

Internet service has been introduced in Bangladesh in 1996 and at