

















Bangladesh

Bangladesh is located

in the North-Eastern part of South Asia. The majestic Himalayas stand some distance to the North, while in the South lays the Bay of Bengal. There is West Bengal border on the West and in the East lie the hilly and forested regions of Tripura, Mizoram (India) and Myanmar. These picturesque geographical boundaries frame a low lying plain of about 147,570 square kilometer criss-crossed by innumerable rivers and streams.

Mighty rivers are the Padma (Ganges), the Brahmaputra (Jamuna) & the

Meghna and the Karnafuli.

Bangladesh offers many tourist attractions, including archaeological sites, historical mosques and monuments, longest natural beach in the world, picturesque landscape, hill forests and wildlife, rolling tea gardens and tribes. Tourists find the rich flora and fauna and colorful tribal life very enchanting. Each part of the country offers distinctly different topography, flavors and food. It is home to the Royal Bengal Tigers, freshwater pink dolphins, historical temples made of red earth.

The People's Republic of Bangladesh

Capital: Dhaka

Area: 147,570 square kilometers

Population: 14,97,72,364*

Population Density: 1015 (Per Sq. km)

Language: Bangla (Bengali)

Currency: Taka (BDT)

Life Expectancy: 59 years

Annual GDP per Capita: U.S. \$1,044

Literacy Rate: 43 percent

Tele-penetration: 67 percent

Mobile Coverage: 90% Population Internet Penetration: 25 percent

*BBS, March 2011 (adjusted)

CONNEXION

Bimonthly Newsletter of AMTOI Annual Issue Year 02. Volume 01.

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More than half of the population in Bangladesh at present has continuous access to mobile telephony and the number is growing every day. Considering the reach of mobile internet, the availability of online banking and FM radios, Bangladesh is currently one of the fastest growing markets in the world in terms of communication outreach.

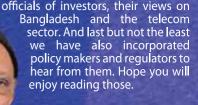
The telecommunication sector of the country was full of events in the 2013 of which two were very significant; one is touching the 100 million active subscribers' base. There have been only 14 countries in the world which has such huge numbers of mobile subscribers. Another important event is auction of Third Generation (3G) technology and prompt launching of the high speed Internet service commonly known as Mobile Broadband (MBB). We have every reason to believe that the 3G technology will revolutionize the socio economic development of the country. In this issue of Connexion we have highlighted the opportunities created by the mobile telecommunication industry, the most

promising of all sectors of the country, not only boosting the economy of Bangladesh but also creating multiple opportunities for the people as well as the nation.

Bangladesh's dynamic telecom sector despite all its commendable jobs i.e. being one of the fastest growing telecom markets in the world; the largest provider to the Foreign Direct Investment (FDI); one of the main sources of government's tax revenue and one of the largest employers in the country is facing huge challenges due to lack of a congenial tax regime conducive to the sector. A telecom roadmap is also much needed for operators' strategic plan for investment.

The current issue coincides with the Mobile World Congress (MWC) which has been taking place at Barcelona, Spain. Mobile World Congress 2013 was another record-breaking event graced with more than 72,000 attendees from all across the globe. More than 41,000 C-Level leaders comprising of more than 4,300 CEOs in attendance, nearly 1,700 exhibitors utilizing 94,000 net square meters of exhibition and business meeting space decorated the event. As many as 3,400 press members representing 1,500 media outlets from 79 countries are expected to attend this year's MWC. Year over year, the GSMA Mobile World Congress attracts the largest number and highest-quality attendees of any event in the mobile industry.

This issue of Connexion contains a different touch. We have made our effort to have global leaders' views and their thoughts about Bangladesh and its telecommunication sector. Telecommunication has been very successful to attract foreign direct investment (FDI). Therefore we have tried to hear from key





An electronic version of "ConneXion" is also available on our website: www.amtob.org.bd. Feedback : connexion@amtob.org.bd

Minister Ministry of Posts, Telecommunications And Information Technology Government of the People's Republic of Bangladesh

মন্ত্রী
ডাক, টেলিযোগাযোগ
এবং
তথ্য প্রযুক্তি মন্ত্রণালয়
গণপ্রজাতন্ত্রী বাংলাদেশ সরকার

MINISTER'S MESSAGE



It is my great pleasure to know that the Association of Mobile Telecom Operators of Bangladesh (AMOTB) has taken an initiative to publish annual issue of its newsletter "ConneXion". The newsletter Connexion has been instrumental to update us on the latest industry happenings with its enriched contents since start of its journey last year.

I am very positive towards the development and growth of the industry, as telecommunication sector is one of the main components and a catalyst for driving my government's vision to achieve "Digital Bangladesh" and graduate the country to a middle income economy by 2021.

Mobile telecom industry has made significant gains to realize the dreams of the Father of the Nation Bangabandhu Sheikh Mujibur Rahman under the able leadership of his daughter the Honorable Prime Minister Sheikh Hasina.

I am really pleased to the sector for its vital role but at the same time I would like to urge the decision makers of the sector to be pro-people for spreading the benefit of mobile communications. Please help my government to achieve our agenda for Digital Bangladesh, as you know the issue is very close to the heart of our Prime Minister Sheikh Hasina.

My government will do everything possible for the development of the sector through harmonizing national policy to bridge the digital divide.

I expect that the newsletter Connexion will be the medium to help us acknowledge the remarkable achievements the Mobile Telecom industry has made both in the lives of the people and at economic level.

I wish every success to the journey of AMTOB Newsletter "Connexion".

Abdul Latif Siddique

Minister

Ministry of Posts, Telecommunications and Information Technology



CHAIRMAN'S MESSAGE



It gives me immense pleasure to know that AMTOB is publishing the annual issue of its newsletter Connexion after successfully completing publication of seven issues since its inception in April 2013.

I am proud to represent a telecom body that has strategically placed itself in the core of the Telecom Industry in Bangladesh. Association of Mobile Telecom Operators of Bangladesh (AMTOB) has been playing an instrumental role in the growth of the country's mobile telecom sector and has been the voice of the industry.

Creating value chain and enhancing productivity are two major contributions of mobile telecom ecosystem in sustainable development of Bangladesh. MNOs are investing significantly to build, operate and maintain their network which creates noteworthy forward and backward linkages.

The tax paid by MNOs is amongst the highest in the service industry which has helped the Government to boost up national revenue. Till 2012, MNOs contributed more than BDT 40,000 Crore to the government exchequer. MNOs have created over 1.5 million direct and indirect employments. More than 96 percent of the country's 36 million internet subscribers are being benefitted from mobile Internet access. In social context, MNOs have given banking facility to the unbanked, provided cell/SMS broadcasting and alert services which have enriched their lifestyles and has helped to bridge the great digital divide.

The decade has moved from voice to data era with the introduction of 3G services. Mobile Phone today is an internet device. With the advent of 3G technology Mobile Phone data users are on the rise. New and innovative data products are being offered to the mobile customers to enrich their lives. Bangladesh market will soon experience the benefits of technological evolution.

A major challenge for the industry is unfriendly taxation. Mobile operators in Bangladesh are overburdened with one of the highest tax rates in Asia. Mobile networks cover more than 99% of the population and the number of connections activated so far is around 114 million as of January 2014. Number of subscriptions has almost doubled in the recent years.

I believe the contents of AMTOB newsletter Connexion has provided food for thoughts for many learned readers. If Connexion has stirred the least bit of inspiration into your very hearts then we would deem ourselves grateful. I hope you would enjoy reading Connexion's future issues.

Chris Tobit

Chairman of AMTOB & CEO of Airtel Bangladesh Limited

AMTOB EXECUTIVE COUNCIL



airtel **Chris Tobit** Chairman of AMTOB & CEO of Airtel Bangladesh Limited



Ziad Shatara Member of AMTOB Executive Council & **CEO** of Banglalink Digital Communications Limited



grameenphone

Vivek Sood Member of AMTOB Executive Council & **CEO** of Grameenphone Limited



Mehboob Chowdhury Member of AMTOB Executive Council & CEO of Pacific Bangladesh Telecom Ltd. (Citycell)





আমাদের ফোন

Md. Mujibur Rahman Member of AMTOB Executive Council & Managing Director of Teletalk Bangladesh Limited



Supun Weerasinghe Member of AMTOB Executive Council & CEO of Robi Axiata Limited







TIM Nurul Kabir Secretary General

ABOUT AMTOB

Association of Mobile Telecom Operators of Bangladesh

(AMTOB) is a national trade body representing all mobile telecom operators in Bangladesh. AMTOB has emerged as the official voice of the Bangladesh mobile industry to interact with relevant government agencies, regulators, financial institutions, civil society, technical bodies, media and other national & international organizations. It provides a forum to discuss and exchange ideas between the stakeholders and the industry actors for the development of mobile telecom industry through public private dialogue. AMTOB facilitates an environment which is conducive for its members and industry stakeholders with a view to establish a world class cellular infrastructure for delivering benefits of affordable mobile telephony services to

the people of Bangladesh to bridge the digital divide.



T I M Nurul Kabir Secretary General **AMTOB**





Ashraful H. Chowdhury Chief Corporate Affairs Officer Airtel Bangladesh Limited





Zakiul Islam Regulatory and Legal Affairs Senior Director Banglalink Digital Communications Limited





Md. Mahfuzur Rahman Chief Corporate Affairs Officer Pacific Bangladesh Telecom Limited (Citycell)





Mahmud Hossain Chief Corporate Affairs Officer Grameenphone Limited





Mahmudur Rahman Executive Vice President, CORA Robi Axiata Limited





Kazi Md. Golam Quddus GM, Regulatory & Corporate Relation Teletalk Bangladesh Limited





MOBILE TELECOMMUNICATIONS CREATING OPPORTUNITIES IN BANGLADESH

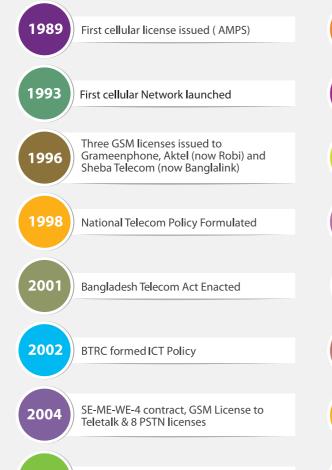
The mobile telecommunication sector, which is the most promising of all sectors of the country is not only boosting the economy of Bangladesh but also creating multiple opportunities for the people as well as the nation.

The sector has been one of the prodigious success stories of the Bangladesh economy over the past 17 years with mobile subscribers growth exceeding all expectations.

Bangladesh never shied away in embracing new technologies and the country pioneered in bringing mobile technology in 1989, first among its South Asian neighbors and just within a decade of first launching of commercial mobile network by NTTN in Japan.

There is no doubt that the Mobile Network Operators (MNOs) are playing a pivotal role in the development of the country. There have been two aspects, firstly the economic development of the country and secondly - social contribution.

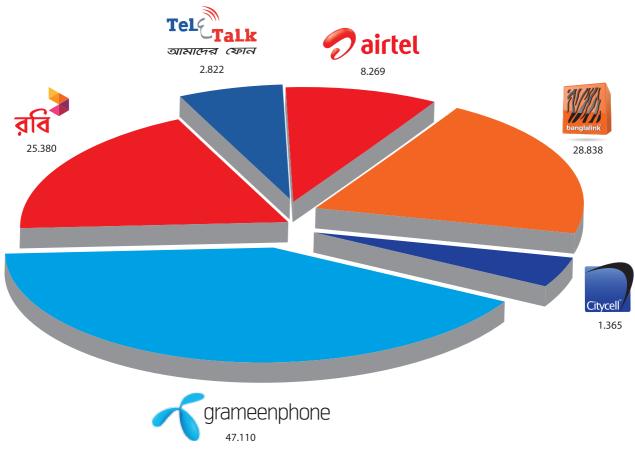
In the year 1997, there have been only 400,000 telecom subscribers and the tele-penetration was below 4 percent. At the end of 2013, the number of mobile subscribers stood over 113.78 million and tele-penetration reached around 67 percent. The number of mobile subscribers exceeded the 100 million mark in Bangladesh in April 2013. Only 14 countries in the world have such huge number of



GSM license issued to Warid (now Airtel)

2005

2006	Information Technology Act passed, Broadband policy formulated
2007	ILDTS Policy enacted, National Numbering Plan introduced
2008	BTRC awarded license for trial of 3G/HSPA by vendors. Mobile Payment Guideline formulated
2009	2 WiMax Licenses Issued, 3 ICXs, 4 IGWs, 2 IIGs licenses issued. ICT Policy revised, vision for Digital Bangladesh by 2021 launched
	DTDA CIMA/DIJIMA De seisturations Cocidalina
2010	BTRA, SIM/RUIM Registration Guideline Call Center License, Plan of Satellite Launching, ITU Executive Council Membership
2011	2G License Renewal, Terrestrial Cable License Guideline on MFS enacted
2012	3G Licensing Guidelines, Post Activation, VAS Guideline, Telecom Competition Regulation
	Country touched 100 million subseribers
2013	Country touched 100 million subscribers' base. 3G Auction held to allocate 2.1 GHz spectrum. Four private operators launched commercial 3G network. Sets in record by forming world's largest Human flag by Robi



Mobile Network Operators' Market share in Million (end of December 2013)
Source-BTRC

subscribers who have engraved their names into the 100 Million Club. Bangladesh hierarchically stands in the 12th position preceding Philippines and Mexico in the 13th and 14th places respectively.

The burgeoning growth of sector has immense impact on Bangladesh's economy. As well as being the largest contributor to Foreign Direct Investment (FDI), the catalytic effect of rapid mobile penetration on increasing the quality of life of millions of people has been significant.

MNOs INVESTING IMMENSELY

Mobile Network Operators (MNOs) have been contributing significantly in the national exchequer in the form of revenue sharing, VAT and other taxes. The government has earned substantial revenues also from the auction of Third Generation (3G) technology. There was a huge increase of government revenue from the sector; the government revenue was BDT 3.45 crore in the fiscal year 2001-2002 that increased manifold reaching to BDT 5,404.69 crore in the FY 2012-2013, according to BTRC annual report.

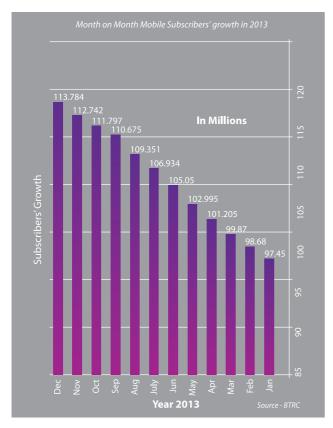
According to a Bangladesh Bank report the sector

contributed upto 8 percent of the national revenue in 2008. One of the major beneficiaries of the mobile industry is the government. Tax revenue is generated in many ways. A large proportion of the value-add "retained" by the mobile operators is used to pay taxes such as VAT, import duty, handset royalty and supplementary duty. Wage income accruing to employees is subject to income tax. Value-add flowing to other sectors also generate tax revenue. The government earns about 10 percent of its revenue from mobile telecommunication sector. The sector contributes 2.3 percent in GDP.

ATTRACTING FOREIGN DIRECT INVESTMENT (FDI)

Mobile telecommunication sector is one of the largest sectors which have attracted highest volume of FDI in recent times and if the successful journey of the sector continues then there will be more investment from abroad in the sector.

There is a strong positive relationship between economic growth and FDI because larger inflow of foreign investment ensures a sustainable growth in the economy. Foreign investments are generally risk



free and bring advanced technological and managerial advantages. Mobile telecom industry remains the largest contributor to FDI for the government of Bangladesh. In 2001, the contribution was only 0.9% but in 2010 it increased to 60.4%. Considering this data, it can be deduced that for every USD 100 worth of FDI, more than 60% has been invested by mobile operators. The impact of mobile services on the economy of Bangladesh, as everywhere, is potentially extensive. A high-quality communications infrastructure is widely held to allow human capital to be deployed more effectively and more productively. Right to communicate is now recognized as a fundamental right.

In recent years, mobile services have grown substantially. The ICT sector, of which telecommunications is a crucial component, is broadly understood to be a key driver for productivity and economic growth.

In addition to comprising an important and growing component of output, mobile services play an important role in allowing individuals and businesses to improve their productivity.

ROLE OF MOBILE PHONE IN A FARMER'S LIFE 05:00-11:00 Listen to FM radio music or mobile while working or his 1 hectare farmland 04:00 Wakes up to rooster crowing. Check schedule on mobile 13:00 SMS the neighborhood agricultural supply shop owner on available stock 0 before getting out of bed 21:00 Use mobile phone as a flashligh Visit the agricultural supply when electricity goes off. Check schedule before Shop to purchase seeds and fertilizers. Top-up talktime going to bed at the shop next doo 17:00 Call friends to meet up

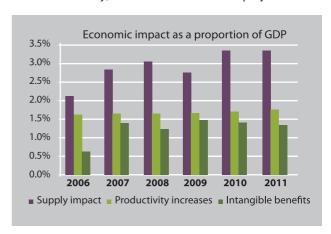
Mobile telephony is no longer a fancy but an important business and social tool, allowing users to conduct their affairs with greater efficiency whilst staying in touch with families more easily.

Typically in developing countries, mobile services now take the role that fixed communications played in developed countries. However, countries developing today have the advantage that mobile communications are far cheaper and easier to deploy than fixed communications. The lower cost of installing mobile services compared with fixed services, particularly in rural areas, allows disadvantaged groups to gain access to communication more quickly. Mobile is therefore a more unrestricted mode of communication than fixed. By improving the communications infrastructure of Bangladesh, mobile communications may also have a role to play in improving the flow of Foreign Direct Investment (FDI) as investors are far more likely to invest in a country with a well-established communications infrastructure.

Because of the relative ease with which mobile communications networks can be deployed and the replicate-ability of the business models from country to country, mobile communications is usually one of the very first technology related sectors to enjoy the benefits of FDI.

CREATING EMPLOYMENT

The contribution of mobile services to employment comprises of four components. Firstly, there is the "direct" employment of the industry or workers directly employed by the players in the value chain. Secondly, there is the "support" employment, which is created by outsourced work and taxes that the government subsequently spends on employment generating activities. Thirdly, there is the "indirect" category, which covers other costs as well as profit generated, which is subsequently spent on employment generating activities. Finally, there is the "induced employment"



MNOs Revenue and Investment [In Million BDT]			
Operator	Revenue	Investment	
Grameenphone	92,047.00	14,992.00	
Banglalink	37,878.93	31,660.59	
Robi	34,557.81	17,826.07	
Airtel	10,527.79	8,918.22	
Teletalk	3,572.79	1,434.77	
Citycell	3,470.27	4,903.97	
Total	182,054.59	79, 735.62	

category which refers to jobs created as employees and other beneficiaries spend their earnings, thereby creating extra employment. It is crucial to have a mobile telephony service that is cheap, widely available and of high quality. The sector has created over 1,500,000 direct and indirect employments.

MOBILE SERVICES

Source - BTRC Annual Report 2011- 2012

Educational information including results admission, citizen services from the government e.g. birth registration, land registration and many more activities can be done electronically. This is now a lifeline of our livelihood and economic development. This is the only sector that has changed the ecosystem of cross section of people of the country. Now, we don't have any other option at all to live our life without mobile phones.

Broadband, especially the mobile broadband which is an enabler of Digital Bangladesh can be achieved various technologies. However, Bangladesh is lacking a well-built fixed network, wireless technology would be the most efficient way to grow broadband.

MOBILE SERVICES ENHANCING HEALTH CARE

Nowadays a mobile phone user can instantly and easily get access to a doctor and seek for advice on different health issues. In mobile health services doctors can examine patients sitting in a remote place and even can check medical report, conduct some clinical tests e.g. ECG, X-ray and temperature check.

Mobile phone initiatives in Bangladesh are allowing patients to reach a health worker for advice 24 hours a day, receive prenatal care reminders and even send complaints about patient care.

A voice-based service that offers health information to pregnant women and new mothers in Bangladesh hit 100,000 subscribers in July 2013 within six months from launching of this innovative service. The service, which is called Aponjon (meaning "trusted one") was launched earlier this year by public-private partnership Mobile Alliance for Maternal Action (MAMA).

The aim of Aponjon is to dispel commonly held misconceptions about child birth, while informing mothers of genuine health hazards and warning signs. The service also offers guidance to local healthcare services and explains the benefits of family planning. The voice-based service was designed for an audience with a low level of literacy.

MOBILE SERVICES CONTRIBUTION IN EDUCATION

BBC Janala is part of English in Action (EiA), a major educational initiative funded by UKaid from the Department for International Development (DFID) and implemented through a partnership between the UK Government and the Government of Bangladesh. The project aims to raise the English language skills of 25 million Bangladeshis by 2017. As part of EiA, BBC Media Action has introduced a unique, multi-platform, award-winning service called BBC Janala, which aims to help the people of Bangladesh learn English in innovative ways, using mobile phones, print, web, television, CDs and books. Over 23.8 million people have accessed BBC Janala to date, from all socio-economic groups. Through its janala (window) service, the BBC offers 250 audio and SMS lessons at different levels. Each lesson is a three-minute phone call costing about Taka 3.

MOBILE FINANCIAL SERVICES

The overall growth of the country's mobile financial transaction increased by 186% while the customer growth expanded by 262% in the just concluding year 2013, due to easy and hassle free financial transaction for the customers both in urban and rural areas. In 2013, Mobile Financial Services (MFS) have shown significant growth in all respect.

At the beginning of the year 2013, the total number of mobile banking agents was 59,559 which swelled to nearly 2 lakhs by the end of the year. In April 2013, the number of mobile financial services customer was 50 lakh and in 11th of November, it crossed the milestone of one crore. In December 2013, it went up to above one crore, which demonstrates the growing popularity of this service. In January 2013, the total number of transactions and total amount transacted were around one crore and BDT 2,000 crore respectively. And at the end of the year, total number of transactions and total amount transacted stood at three crore and BDT 6,642 crore respectively. Out of 28 banks that got permission for MFS service from Bangladesh Bank, 19 banks are so far delivering MFS services across the country. The mobile financial services was introduced in the country in 2010 in a bid to bring the poor and unbanked people under banking activities as well as to facilitate the Bangladeshi expatriates to safely send their remittances in the rural areas.

MOBILE SERVICES FOR AGRICULTURE INFORMATION

Even the farmers, these days can have the access to necessary agricultural information and product prices by using their mobile phones.

Bangladesh is an agrarian country and 80 percent people of the country are engaged in agricultural works. Considering the literacy rate and lack of modern knowledge on agriculture MNOs in collaboration with Agriculture Information Services launched different services for the 'farmer' community of Bangladesh. This basket of services has been introduced to help anyone who is directly or indirectly related to agriculture or agro-business. In fact, this service basket is to support the complete value chain of agro economy.

The service is accessible for users of five of the country's mobile operators: Airtel, Banglalink, Citycell, Grameenphone and Robi.

In the past, sugarcane farmers, used to struggle a lot to get their purchase orders commonly known as "Purjee". Purjee is the purchase order issued by the sugar mills authority indicating that farmers have to bring the promised amount of canes to the mills within three days. The Digital Purjee Information Service replaces the paper notification with an instant SMS notification which informs the grower that his Purjee has been issued and that he may start preparing his harvest for supply to the mills.

The case of 20,000 sugarcane farmers in Faridpur and Jhenidah is a brilliant example of whether one needs to start with automation to end up in service delivery. Since 1932, the purchase order, called 'purjee', to sugarcane farmers was sent out to growers on paper. They are now getting it electronically via mobile phones without any hassle at all. As many as 2 million purchase orders have been sent for sugarcane purchase over SMS so far.

MOBILE SERVICES IN DISASTER MANAGMENT

Bangladesh's high-growth mobile phone sector has been contributing to disaster risk reduction, and the cyclone-affected costal regions. The Disaster Management Bureau (DMB) has teamed up with the country's mobile phone providers to provide early warnings for cyclones and floods to all coastal districts.

Mobile operators in an another project has teamed up with the Campaign for Sustainable Rural Livelihoods, the Center for Global Change and two international NGOs, Oxfam and CARE, to provide early weather warnings to fishermen at sea using the company's global positioning system (GPS).

MOBILE SECTOR'S RECOMMENDATIONS

The industry applauds the government decision for reduction of SIM card tax, which is counterproductive as it represents a wall that low income consumers have to climb before owning a mobile phone connection. The SIM card tax increases the total cost of ownership of a mobile phone and actually reduces total tax collection of the government from the industry. It is a negative proposition all round. As consumers lack access to mobile services, the government loses with lower tax collection as the number of users declines and mobile operators have a diminishing customer base. The elimination of the SIM card tax is essential to re-establish the growth path of the mobile industry in Bangladesh and would work in a counter-cyclical manner stimulating the whole economy.

Full withdrawal of SIM Tax will further accelerate industry growth that will result in higher government revenue from the existing sources. Ultimately VAT on higher revenue results in greater contribution through revenue sharing.

Removal of SIM tax will reduce government's revenue on one hand but will increase it on the other hand and the net impact for government is very much positive. As per an estimate, removal of SIM tax will generate net additional revenue of BDT 10 Billion for government over a three-year period.

Despite all the good works by the sector, MNOs are getting no incentive in comparison to other service sectors. None of the Chief Executives Officers (CEOs) of MNOs are yet considered as Commercially Important Person (CIP). The sector has been playing an important role in connecting the unconnected which is a thrust of the government but sadly enough it is yet to get its due recognition and a congenial regulatory environment. But the progress of mobile telecommunication sector will continue against all odds. The government and industry need to work hand in hand to take the sector forward.



POLICY MAKERS' VIEW





MD. Abubakar Siddique Secretary Posts & Telecommunications Division Ministry of Posts, Telecommunications and Information Technology

Md. Nazrul Islam Khan Secretary Information & Communication Technology Division Ministry of Posts, Telecommunications and Information Technology









IN FACT WE HAVE ALREADY OBSERVED THE IMPACT OF TELECOMMUNICATION AND ICT ON THE GDP GROWTH OF BANGLADESH

MD. Abubakar Siddique

Secretary

Posts & Telecommunications Division Ministry of Posts, Telecommunications and Information Technology

Mobile telecommunication industry is one of the main drivers of the economy of the country. What major activities do you think is required to accelerate the growth and development of the mobile telecom sector in next 3 years?

There is no doubt that telecommunication and ICT industry is one of the main drivers of the economy of any country. In fact we have already observed the impact of telecommunication and ICT on the GDP growth of Bangladesh.

A significant amount of government revenue is earned from this sector. But Government is intended to support the industry through various means and trying to relax the tax burden on the industry. Recently the SIM Tax has been reduced significantly which will ultimately contribute to faster telecommunication growth in the country.

The Ministry has been working relentlessly to spread Internet facilities to all districts and upazillas (Sub-district) level. The Ministry has taken steps to amend some policies and rules including Bangladesh Telecommunications Act (BTA), NTTN Guideline etc. I believe those steps would help the sector to grow further and contribute more in the economy.

How do you evaluate the future of the telecom sector, which has shown tremendous growth potential and is acting as a change agent in Bangladesh?

Bangladesh's telecommunication sector has proved its huge potential; the country's mobile phone subscribers have reached 100 million milestone in April last year (2013). The country is now one of the proud members of the 14 countries in the world which have over 100 million active mobile phone subscribers.

There has been substantial improvement in enhancing Internet users in the country and mobile operators have contributed a lot in this as it was revealed that around 95% of Internet users connect the net via mobile. I believe the 3G network will bring qualitative changes in the economy.

The increasing use of mobile phone communication for citizen service has shown further potential for the industry. In absence of a doctor in remote villages a mobile subscriber can just dial a number and get treatment from qualified doctors; they can send and receive money from their near and dear ones just by sending an SMS.

Farmers can fetch necessary information related to agriculture through SMS or making a call to a certain number. This has enabled farmers for improved farming practice and technique, timely access to agriculture information-market and price.

Utility service users can pay their bills without going to banks and people can buy train tickets via mobile phones.

What in your opinion are the major challenges to the continued growth of mobile telecom sector Bangladesh? What measures do you think are necessary right now to counter these challenges?

In Bangladesh, telecommunication is an integral part of ICT, which has been a thrust sector for long. The government has special consideration and care for the telecommunication sector for its growth and development but despite everything we see some challenges ahead of the sector e.g. delay in clearance of imported telecom equipment, slow pace of deployment of Internet and to provide better service to the customers.

At government level, we are always in consultation with relevant authorities to introduce a justified tax regime conducive for the sector. As the government has a vision to spread Internet facilities up to the root, therefore mobile operators should take effective measures to meet their roll out KPIs set by BTRC in accordance with 2G and 3G licensing guidelines.

National Telecommunication Policy (NTP) is an important directional document for a country for the national development from the contribution of the telecom sector. When the country is going to have a revised National **Telecommunication Policy (NTP) which** your Ministry has already initiated how it will impact the country's telecom landscape? Could you please elaborate when the country is going to adopt a Roadmap Telecom for implementation of the NTP?

There is no doubt that National Telecommunication Policy (NTP) is an important document for a country for the development of telecommunication sector. The MoPT has taken initiative to revise this considering the necessity of the directional document. We have in the meantime consulted with relevant stakeholders and soon will complete the revision process.

Introduction of a telecom roadmap is in our agenda and we are trying to find modalities for the roadmap to help stakeholders in the sector. We shall try to address the issue following the revision of the NTP.

Telecommunications is one of the sectors which have attracted large Foreign Direct Investment (FDI). Does your ministry have any plan to take any initiative to attract more FDI?

Telecommunication sector has contributed highest Foreign Direct Investment (FDI) which accounts for 59 percent of the total FDI in 2011, according to statistics. As you know, the Board of Investment (Bol) is the main authority for attracting FDI but as a government body the Telecom Ministry is working as a catalyst to attract more FDI by creating an enabling business environment so that foreign

companies are attracted to invest in telecom sector of the country.

The global trend, as already observed in many countries, is to integrate the **ICT and Mobile Telecom Sectors at the** policy and regulatory levels since many of the functions of both sectors are converging. Do you think Bangladesh is advancing in the same direction? What is MoPT's opinion and strategy in this regard?

Convergence of Telecommunications and Information Communication Technology (ICT) has been a growing phenomenon around the world and Bangladesh should not be an exception.

Traditionally, regulatory frameworks were designed for an era when clear functional differences existed between services and infrastructure, but these regulations are increasingly inadequate for dealing with today's world.

I think Bangladesh is progressing in the right direction. It is worth mentioning here that BTRC had engaged consultants to formulate policy and guideline for unified licensing regime couple of years back and organized stakeholders' consultation in this regard.

MoPT has consented to collaborate an AMTOB project on capacity building titled "Strengthening ICT and Telecom Sector in Bangladesh". How do you evaluate the prospect of the project? Do you think it would be a unique example of Public Private Partnership?

I am well aware about the AMTOB project "Strengthening ICT and Telecom Sector in Bangladesh". I personally feel that the project would be able to add value and bring qualitative changes which are very much required for the sector. Definitely it would be a

unique example public private partnership in the country for which the government has taken several initiatives in order encourage more Public Private Partnership projects.

There is no doubt that **National Telecommunication** Policy (NTP) is an important document for a country for the development of telecommunication sector.





Mobile phones have done a revolution in Bangladesh

Md. Nazrul Islam Khan

Secretary Information and Communication Technology Division Ministry of Posts, Telecommunications and Information Technology

HOW YOUR MINISTRY IS PLANNING TO SUPPORT ATTAINMENT OF OVERALL SOCIO-ECONOMIC DEVELOPMENT OF THE COUNTRY BY ESTABLISHING ACCESS TO INFORMATION TECHNOLOGY FOR ALL THROUGH RESEARCH, DEVELOPMENT, SUCCESSFUL UTILIZATION AND DIGITAL MANAGEMENT OF INFORMATION AND COMMUNICATION TECHNOLOGY?

ICT is a great enabler. It can help attaining socioeconomic goals immensely. Like any other nation, Bangladesh has also taken initiatives to utilize ICT in national development. As you know, the government has undertaken the Digital Bangladesh initiatives quite a few years ago. All the ministries and institutions of the government have determined their respective activities to build the digital Bangladesh. The government established the A2I project which has helped to extend ICT facilities to rural and marginalized people. Now people in the remote corners of the country are able to access the benefits of ICT through Union Information and Service Centers (UISC). The government will continue to undertake similar activities to further enhance the people's access to ICT.

THIRD GENERATION (3G) TECHNOLOGY, WHICH IS CONSIDERED AS ONE OF THE CARRIERS OF MOBILE BROADBAND (MBB) HAS BEEN LAUNCHED RECENTLY IN BANGLADESH. HOW WOULD IT AID TO THE DEVELOPMENT OF THE ICT SECTOR?

3G will help to offer mobile broadband for wider population. In our country, broadband is not yet available in true sense. As a result, people cannot take the benefits of various data-driven services. 3G will tremendously help to avail such services. Taking opportunity of mobile broadband, operators and content providers will develop and introduce many innovative services. Already you have seen many mobile apps being developed in Bangladesh. This will increase and ultimately people will benefit by accessing various services through mobile from any part of the country.

TELECOMMUNICATION HAS BEEN THE DRIVING FORCE IN THE PROFUSION OF **BROADBAND IN BANGLADESH. ACCORD-**ING TO YOU WHAT ARE THE HURDLES WITHIN THE TELECOM SECTOR THAT ARE HINDERING FURTHER GROWTH TO **ACHIEVING WIDER CONNECTIVITY THROUGHOUT THE NATION?**

Our internet connectivity was very limited until now. But presently, there is 3G and we expect that within a short time, people from every part of the country will be able to enjoy the mobile broadband service. So, I don't see many hurdles. But private operators must invest more to make the broadband service available to the remote people.

THE GOVERNMENT HAS A VISION TO FETCH BENEFIT OF ICT SECTOR TO **ENABLE IT CONTRIBUTE TO THE ECONOMY OF THE COUNTRY. HOW DO** YOU PERCEIVE THE FUTURE OF THE ICT **SECTOR IN BANGLADESH?**

With the pro-active approach of the government, ICT sector is advancing rapidly. Software sector has touched a new height in last few years, and export earning is increasing every year. Rural people are now getting the benefits of ICT. Mobile phones have done a revolution in Bangladesh. Mobile users crossed 100 million mark last year. Government has introduced e-government in many areas. E-commerce and mobile money have made people's lives easier. So, the future of ICT in Bangladesh is very bright.

COULD YOU PLEASE SHARE WITH US ANY ACTIVITIES PLANNED BY YOUR MINISTRY FOR 2014 FOR FURTHER IMPROVEMENT OF ICT SECTOR IN **BANGLADESH?**

Development of National ICT Infra-Network for Bangladesh Government, is a project to achieve the e-Governance system, e-filling, e-service and networking in all ministries/divisions including district administration and upazilas. Infrastructure development in important government departments is also going on. BanglaGovNet project is being implemented with the assistance from Government of Korea to connect government entities to develop a Public Network for the Government of Bangladesh. Under this project all ministries/divisions, major departments of Dhaka district, all DC offices and 64 UNO offices will be connected.

Leveraging ICT for Growth, Employment and Governance in Bangladesh, the project development objectives are to catalyze the growth of Bangladesh's IT/ITES industry for employment creation and export diversification; and strengthen IT/ITES facilities, policies, standard and guidelines for public sector modernization. Under this project 30,000 skilled manpower will be developed for IT/ITES sector, national data center will be extended and disaster recovery center will be established.

Development of National ICT Infra-Network for Bangladesh Government Phase-II Info-Sarker project with the assistance from Government of China is being implemented to connect the upazila level offices with the public network.

Apart from those we have other projects e.g. Capacity Building on ITEE Management, Empowering Rural Communities - Reaching the Unreached: Union Information and Service Center (UISC), Support to Development of Kaliakoir Hi-Tech Park and Learning & Earning Development Project which is a freelancer training program.

HOW DO YOU PERCEIVE THE ROLE OF AMTOB, WHICH HAS BEEN WORKING AS A CATALYST FOR BRIDGING THE STAKEHOLDERS, IN THE CONTEXT OF THE MOBILE TELECOMMUNICATION INDUSTRY OF THE COUNTRY?

I am happy to see that AMTOB has taken an active role in coordinating the mobile operators. This will definitely help to represent the sector in a unified way. I believe telecom sector will be more organized under the leadership of AMTOB. As an organized sector, mobile telecom can do much more for the development of the country. AMTOB can, on one hand, organize the operators and present the issues

of the sector to the policymakers. On the other hand, it can level the expectations of the operators and negotiate for the rights and benefits of the sector from regulators and governthe ment.

3G WILL HELP TO OFFER MOBILE **BROADBAND FOR WIDER** POPULATION. IN OUR COUNTRY, **BROADBAND IS NOT YET AVAILABLE IN TRUE SENSE**

REGULATORS' VIEW





Dr. Atiur Rahman Governor Bangladesh Bank

Sunil Kanti Bose Chairman Bangladesh Telecommunication Regulatory Commission (BTRC)

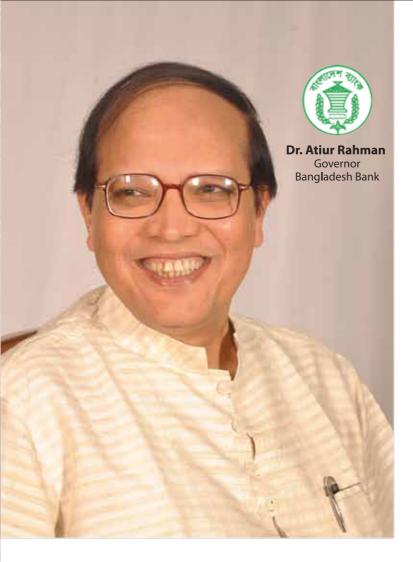








Md. Ghulam Hussain Chairman National Board of Revenue



WE HAVE OBSERVED THAT YOU HAVE BROUGHT REVOLUTIONARY **CHANGES FROM THE TRADITIONAL BANKING SYSTEM TO DIGITAL SERVICES. HOW DO YOU PLAN TO IMPLEMENT THIS IN ORDER TO BENEFIT THE PEOPLE?**

We live in a world which has been progressing rapidly with the changes of technology; therefore it is inevitable to adopt new technologies in a knowledge based economy. There are many other initiatives which relate to the concept of a digital Bangladesh Bank which have taken off for the last few years. This includes initiatives to spur e-commerce including modernization of the country's payment system and financial sector IT infrastructure including online clearing and settlement of interbank paper based and electronic fund transfers, online credit information bureau, the National Payments Switch, mobile financial services and so forth.

These new tools can complement our new Integrated Supervision System which is our new electronic portal which allows us to monitor many aspects of the financial sector both at the aggregate macro level as well as zooming into branch level data. It is critical that this new financial mapping tool is used by both BB and MRA in

making balanced and sound policy and regulatory decisions.

We have introduced Financial Access digital map. Using geographic information systems (GIS) analysis to assess the spatial distribution of bank branches, ATMs, mobile money, agents, and other financial access points we can generate analysis that can be of great operational value to the commercial sector, the public sector, and for guiding regulatory policy. It is this type of practical tool which is essential to generate, disseminate and use knowledge for finance and development.

IN THE PRESENT WORLD MOBILE PHONE HAS BECOME AN ENABLING **TOOL NOT JUST AS A PHONE BUT** ALSO A MEANS OF CHANGE AGENT. **HOW CAN THIS TECHNOLOGY CONTRIBUTE IN SOCIO-ECONOMIC CHANGE OF THE COUNTRY?**

There have been many proof points in favor of mobile technology since its introduction. Telecommunications has demonstrable positive impacts on economic growth especially in developing countries, with independent studies estimating the effect to be almost twice as large as that in developed countries. Recent research by the GSM Association and Deloitte showed that the long-term GDP growth rate of a developing country may increase by as much as 1.2 percentage points with every 10 percent increase in mobile phone penetration. Economic Impact Study by Telenor Group shows that the impact of mobile communications on a country's GDP can be even larger than that. In simple words, mobile technology has revolutionized lives of millions in Bangladesh. Now mobile is not just a means for communication but it is a tool for many services including health, education, entertainment and even payment.

MOBILE TELECOMMUNICATION SECTOR IS ONE OF THE HIGHEST CONTRIBUTORS IN THE FOREIGN DIRECT INVESTMENT (FDI). WHAT MEASURES CAN BE TAKEN TO BRING MORE FDI IN THE COUNTRY?

There is a strong positive relationship between economic growth and FDI because larger inflow of foreign investment ensures a sustainable growth in the economy. Foreign investments are generally risk free and bring advanced technological and managerial advantages. Mobile telecom industry remains the largest contributor to FDI for the government of Bangladesh. In 2001, the contribution was only 0.9% but in 2010 it increased at 60.4%. Considering this data, it can be deduced that for every USD 100 worth of FDI, more than

60% has been invested by mobile operators.

Bangladesh Bank as the highest monetary policy making body has taken some important steps in order to attract more FDIs in the country. Bangladesh Bank has endeavored to introduce some policies which will help flourish the mobile sector further in the field of mobile financial service.

MOBILE NETWORK OPERATORS (MNOs) HAVE BEEN IMMENSELY CONTRIBUTING IN THE NATIONAL EXCHEQUER IN THE FORM OF REVENUE. HOW THE MNOS COULD CONTRIBUTE MORE IN THE NATIONAL ECONOMY AND WHAT CAN THE GOVERNMENT PROVIDE TO THE SECTOR AS AN INCENTIVE?

Mobile Network Operators (MNOs) have been contributing significantly in the national exchequer in the form of revenue, VAT and other taxes. The government has earned substantial revenue also from the auction of Third Generation (3G) technology. There was a huge increase of government revenue from the sector.

According to a Bangladesh Bank report Telecom sector contributed up to 8 percent of the national revenue in 2008. To cope up with the rapid technological changes as well as increasing customer demands, mobile network operators have to invest continuously to upgrade their network and coverage. In order to attract the substantial addressable market MNOs should continue its network expansion to serve its subscribers better.

WE OBSERVED THAT YOU HAVE INTRODUCED AN INNOVATIVE SYSTEM -- MOBILE FINANCIAL SERVICES (MFS)-- THAT HAS ALSO FLOURISHED SUBSTANTIALLY IN BANGLADESH IN THE RECENT PAST. HOW DO YOU FORESEE THE SCOPE AND POTENTIAL OF MFS?

The overall growth of the country's mobile financial transaction increased by 186% while the customer growth expanded by 262% in the just concluding year 2013, due to easy and hassle free financial transaction for the customers both in urban and rural areas. In 2013, Mobile Financial Services (MFS) have shown significant growth in all respect.

At the beginning of the year 2013, the total number of mobile banking agents was 59,559 which swelled to nearly 2 lakh by the end of the year. In April 2013, the number of mobile financial services customers was 50 lakh and in 11th of November, it crossed the milestone

of one crore. In December 2013, it went up to above one crore, which demonstrates the growing popularity of this service. In January, 2013, the total number of transactions and total amount transacted was around one crore and BDT 2,000 crore respectively. And at the end of the year, total number of transactions and total amount transacted stood at three crore and BDT 6,642 crore respectively. Out of 28 banks that got permission for MFS service from Bangladesh Bank, 19 banks are so far delivering MFS services across the country. The mobile financial services was introduced in the country in 2010 in a bid to bring the poor and unbanked people under banking activities as well as to facilitate the Bangladeshi expatriates to safely send their remittances in the rural areas.

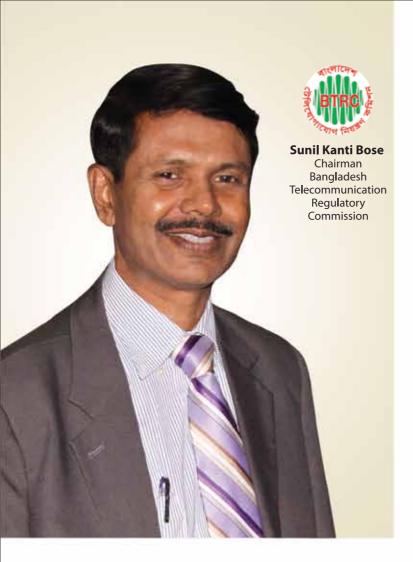
HOW DO YOU FORESEE MOBILE NETWORK OPERATORS (MNOs) CONTRIBUTING TO EXPANSION OF MOBILE FINANCIAL SERVICES IN BANGLADESH TO BRING UNBANKED PEOPLE INTO THE BANKING SYSTEM?

I have already mentioned the success of MFS and one of the important elements for success was the mobile Network Operators (MNOs). It would not have been possible for this rapid deployment of the service if there were no mobile service. Definitely it was a collective effort from all involved quarters but I would like to praise MNOs for providing an enabling environment through their networks which has helped to bring a mammoth number of unbanked people under banking system.

HOW DO YOU PERCEIVE THE ROLE OF AMTOB, WHICH HAS BEEN WORKING AS A CATALYST FOR BRIDGING THE STAKEHOLDERS?

Industry apex body always plays an important role bringing together the stakeholders. I hope AMTOB, in this respectwould play its due role to make the MNOs fully compliant in its business.

Bangladesh Bank has endeavored to introduce some policies which will help flourish the mobile sector further in the field of mobile financial service



HOW DO YOU THINK MOBILE NETWORK OPERATORS (MNOs) ARE PLAYING AN IMPORTANT ROLE FOR DEVELOPMENT OF THE COUNTRY? HOW CAN THEY CONTRIBUTE MORE TO THE NATIONAL ECONOMY?

There is no doubt that the Mobile Network Operators (MNOs) are playing a pivotal role in the development of the country. There have been two aspects, firstly, the economic development of the country and secondly, social contribution.

In the year 1997, there have been only 4 lakh telecom subscribers and the tele-penetration was below 4 percent. At the end of 2013 the number of mobile subscribers stood over 113.78 million and tele-penetration reached around 67 per cent. Bangladesh is one of the 14 countries of the world which has over 100 million mobile subscribers. I can proudly mention that we are ahead of Mexico and Philippines in terms of mobile subscribers' number.

MNOs have emerged as one of the highest revenue contributors to the government exchequer, in the FY 2011-2012. MNOs provided BDT 182 billion revenue and invested BDT 79.73 billion into their network expansion and development works.

The mobile telecom sector has generated huge direct and indirect employment and even amazingly enough that Bangladesh's mobile call tariff is one of the lowest in the world.

The government, ministry and BTRC have been working relentlessly in order to provide MNOs a congenial regulatory environment to spur further growth so that they can offer affordable communication facilities to the people of the country. Actually, mobile operators are the change makers of the country bringing ease to the lives of millions.

ACHIEVING CONNECTIVITY FOR LARGER POPULATION AND REMOVING DIGITAL DIVIDE IS A GLOBAL PRIORITY TO DEVELOP AN INFORMATION SOCIETY AS EMPHASIZED BY MDG AND WSIS. HOW IS BTRC PLAYING ITS ROLE TO ADDRESS THESE ISSUES?

The vision of BTRC is to facilitate connecting the unconnected through quality telecommunication services at an affordable price by introducing new technologies. Bangladesh is currently a member of the executive council of International Telecommunication Union (ITU) and WSIS was an initiative driven by ITU. BTRC is aligned with both the visions of MDG and WSIS. Bangladesh government has a vision to transform the country into a knowledge based society in order to face the challenges of new technological revolution.

THE GOVERNMENT HAS A VISION TO ENSURE BROADBAND CONNECTIVITY DOWN TO THE UNION LEVEL AND ASSIST IN PROVIDING LOW-COST, HIGH-QUALITY TELECOMMUNICATION SERVICES TO ALL. CAN YOU UPDATE US ON THE PROGRESS MADE SO FAR IN THIS DIRECTION?

In line with the government's vision to ensure broad-band connectivity to the Union level, BTRC has taken various measures including awarding of Third Generation (3G) technology license which provides high speed Internet connectivity wirelessly also known as mobile broadband. We have also awarded license to WiMAX operators. The Internet penetration has increased substantially due to this. The country has an Internet subscribers base of 35.79 million of which 34.25 million belongs to mobile Internet, 3.15 million to WiMax and the rest to ISP and PSTN operators together.

The government has undertaken a project to bring government offices up to upazila level under the information communication technology (ICT) network by 2015. Under the project, 55 government offices in each district and 30 in each upazila will be connected to the single network based on the internet. Besides, video conference facilities will also be set up at 800 points including the offices of 421 Upazila Nirbahi Officers throughout the country.

DOES BTRC HAVE ANY PLAN TO FORMULATE A SPECTRUM ROADMAP FOR THE EFFICIENT USE OF THIS SCARCE RESOURCE AND DEVELOPMENT OF THE COUNTRY'S TELECOMMUNICATION SECTOR?

Spectrum is a scarce natural resource and every country needs to have a strategic plan to ensure proper and efficient use of this resource, Bangladesh is not an exception. Bangladesh has its own National Frequency Allocation Plan (NFAP) effective from 2006 and BTRC was careful to revise it from time to time as it is very much associated with the technological advancement. We have already the broad spectrum allocation plan e.g. which frequency will be assigned to whom and for which technology but if you want to know about the roadmap of auction of spectrum that is also very much in our mind. If it is an industry demand, we shall make it public. As you know we have already re-farmed spectrum in 1800 MHz band for GSM operators and BTRC auctioned 2.1 GHz band for Third Generation Technology (3G). We have allocated frequency in 2.3 GHz and 2.5 GHz band for BWA operators. BTRC has plan for allocation of all access and microwave frequencies and if required we will prepare a spectrum roadmap for the market players if that can contribute in their business planning.

BANGLADESH MOBILE TELECOMMUNICATION SECTOR HAS RECEIVED A GREAT BOOSTER WITH THE INTRODUCTION OF 3G. BANGLADESH HAS A HUGE YOUTH POPULATION. WHAT IS YOUR MESSAGE TO THEM TO REAP BENEFIT FROM THE HIGH SPEED MOBILE INTERNET E.G. 3G?

Youths are the driving force in many countries and I really feel encouraged that we have such huge number of youth population in our country. If you look at some global success stories in IT and telecommunication sectors especially in social media e.g. Google,

Facebook, Shazam to name a few all were founded by young people. I believe the talented youth force of the country would be able to exploit the opportunity of high speed Internet connection i.e. 3G to start their ventures and take part in the economic prosperity of the country to eradicate poverty.

GLOBALLY, TELECOMMUNICATION AND ICT SECTORS ARE GRADUALLY CONVERGING. WHAT IS OUR APPROACH AND PLAN TO ALIGN BANGLADESH WITH THIS TREND?

The convergence of telecommunication and ICT is imperative to get more out of these two closely associated sectors. In reality convergence of telecom and ICT would bring better result for the country and eradicate many roadblocks.

Convergence of Telecommunications and Information Communication Technology (ICT) has been a growing phenomenon around the world.

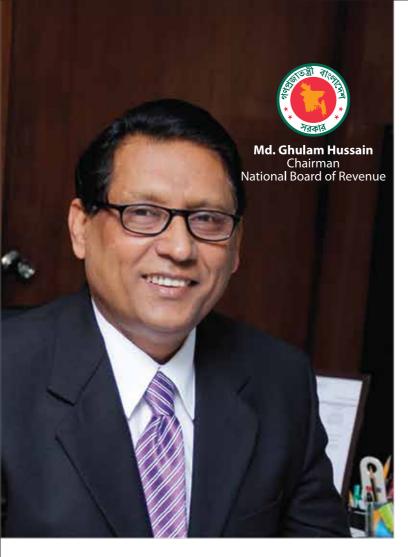
The combination of services over the same platform is challenging common perceptions about the best means to license and regulate providers both in the Telecom and ICT sectors. Traditionally, regulatory frameworks were designed for an era when clear functional differences existed between services and infrastructure, but these regulations are increasingly inadequate for dealing with today's world.

HOW DO YOU PERCEIVE THE ROLE AMTOB IS PLAYING IN THE GROWTH AND DEVELOPMENT OF MOBILE TELECOMMUNICATION SECTOR IN BANGLADESH?

AMTOB is the single platform of the country's mobile network operators, the industry's apex body. In true sense, AMTOB is delivering excellent job in respect of industry stakeholders' collaboration. When in need, BTRC communicate with AMTOB for many important

MNOs issues rather than communicating to individual operators. The organization has successfully harmonized the industry.

Spectrum is a scarce natural resource and every country needs to have a strategic plan to ensure proper and efficient use of this resource, Bangladesh is not an exception



THE GOVERNMENT OF
BANGLADESH HAS BEEN
PURSUING THE VISION FOR
DIGITAL BANGLADESH. HOW DO
YOU CONSIDER THAT THE MOBILE
NETWORK OPERATORS (MNOs)
CAN PLAY A CATALYTIC ROLE IN
ADVANCING THE GOVERNMENT
AGENDA FOR "DIGITAL
BANGLADESH?

The government vision for Digital Bangladesh is a futuristic plan to transform the country into a modern one. The people of the country have already started to witness the benefit of the vision but we need to go further to achieve the vision. To my understanding digital means transformation of manual procedures into digital systems and I believe broadband or high-speed Internet can contribute significantly in this regard.

Third Generation (3G) technology, which is one of the carriers of broadband, has been introduced by Mobile Network Operators (MNOs) which can play a vital role in spreading Mobile Broadband (MBB). I can mention a

study by Mckinsey & Company, where it was revealed that "A 10 percent increase in broadband household penetration boosts GDP between 0.1 and 1.4 percent" and "that broadband could have significant impact on overall societal welfare as it helps boost human capital, improve healthcare and create new opportunities in the poorest and most remote parts of the world."

There have been many proof points to underline the economic impact of broadband e.g. 1000 new connected broadband users' correlates to about 80 new jobs. For every 10 percentage point increase in broadband penetration there is, on average, a 1 percent growth in GDP, stated a 2011 joint study conducted by Chalmers Institute of Technology, Arthur D Little & Ericsson; it was shown that a doubling of average broadband speed yields a 0.3 percent increase in GDP. Moreover a 4-fold increase of Internet speed contributes 0.6 percent to GDP additional growth, according to the same study.

TELECOM INDUSTRY HAS EMERGED AS A DEVELOPMENT PARTNER BY CONTRIBUTING IMMENSELY IN THE NATIONAL EXCHEQUER IN THE FORM OF TAX REVENUE AND VAT. HOW DO YOU CONSIDER NURTURING THE SECTOR FOR GREATER FINANCIAL BENEFIT OF THE GOVERNMENT?

In fact, we have already observed the impact of telecommunication on the GDP growth of Bangladesh. A study made by Deloitte & Touche found that Mobile Communication has raised GDP growth in Bangladesh by 0.12% for 1% increase in mobile penetration.

In terms of overall GDP contribution in 2020 for Bangladesh, the report states that Internet is expected to contribute 2.6% of total GDP and suggests that a 10 percentage increase in Internet penetration is correlated with a 1% increase in the annual rate of new business formation, calculating the creation of over 129,000 jobs alone in Bangladesh by 2020. The bulk of the GDP contributions comes from the increased productivity that internet users enjoy, in services, manufacturing, agriculture, as well as increased diversification of sources of income, a study by the Boston Consulting Group stated.

Here comes the role of financial regulator like National Board of Revenue (NBR). Since the telecom sector has been immensely contributing to national economy it becomes obligatory for us to look after the well-being of the sector by arranging fiscal measures congenial for the industry and we are very sincere in this regard.

MOBILE NETWORK OPERATORS (MNOS) ARE ONE OF THE LARGEST TAX PAYERS OF THE COUNTRY. THE SECTOR IN SPITE OF THAT IS HAVING SOME CHALLENGES IN REGARD TO TAX/ VAT. HOW DO YOU PLAN TO BRING SOME RESPITE ON THE ISSUE TO ENABLE THEM TO CONTRIBUTE MORE IN THE ECONOMY?

I do agree with the fact that MNOs have become one of the largest tax payers of the country. We would be very happy to bring some more changes in terms of tax and VAT for the sector and we have already taken some measures in this regard like reduction of SIM tax by half in the last budget (FY 2013-14) from BD 600 to BDT 300. It is also worth mentioning that VAT on 3G spectrum was reduced to 5 per cent from 15 per cent earlier charged for 2G license renewal.

I would like to request the MNOs to keep in mind that the country is largely dependent on taxpayers' contribution especially by big organizations e.g. mobile phone companies meaning, we have some limitation in financial management as the government has to bear the expenses of the country.

TELECOMMUNICATION SECTOR IN BANGLADESH, WHICH IS AN ENABLER FOR MANY SERVICES, GENERATING EMPLOYMENT AND MANY OTHER BENEFITS FOR THE PEOPLE, IS EXPOSED TO CONSIDERABLY HIGH TAX. WHAT IS YOUR OPINION IN THIS REGARD?

There is no doubt that the telecom sector is doing great apart from contributing in the national economy by creating employment and coming up with various innovative product and services but at government side our limitation is that we are dependent on tax payers' contribution to run the country and carry out development activities.

At NBR we are trying our best to accommodate the directives from honorable Finance Minister with regard to bringing tax and VAT at a tolerable level so that both the industry and the government can have a win-win situation.

IN MANY COUNTRIES AROUND THE WORLD THERE IS NO SIM TAX OR BARE MINIMUM. WHEN THE GOVERNMENT IS COMMITTED TO INCREASE TELE-REACH AND

TELE-PENETRATION, HOW IS NBR PLANNING TO ELIMINATE SIM TAX IN THE FUTURE?

As I already mentioned in my earlier response, the government is largely dependent on tax to bear the expenditure of administration and development of the country. The SIM tax has been reduced gradually and we have plan to eliminate in phases but it will take some time as you know the government has a vision to increase tele-density and tele-reach for which further reduction of SIM tax is a bit contradictory.

HOW THE REGULATORS (NBR, BTRC) AND SERVICE PROVIDERS (MNOs) CAN WORK HARMONY FOR THE GREATER BENEFIT OF NATIONAL DEVELOPMENT?

It is very important to have coordination among different stakeholders including the regulators. Therefore I believe a consorted effort is required for the greater interest of national development.

DO YOU THINK AMTOB'S ACTIVITIES ARE HELPFUL IN CREATING SYNERGY AMONG NBR, INDUSTRY AND OTHER STAKEHOLDERS ON TAX RELATED ISSUES?

As the sole Trade Organization for mobile telecom industry in Bangladesh, I think AMTOB has an impor-

tant role to play in coordinating the views of the sector so that they can be eff e c t i v e I v communicated to the government different regulators to create synergy among all stakeholders, which I believe important for growth and sustainability of the industry.

Here comes the role of financial regulator like NBR. Since the telecom sector has been immensely contributing to national economy it becomes obligatory for us to look after the well-being of the sector by arranging fiscal measures congenial for the industry and we are very sincere in this regard.

GLOBAL LEADERS'VIEW





Dr Hamadoun I. Touré Secretary General ITU

Anne Bouverot Director General And Member of the Board GSMA







WHAT IS ITU'S VISION FOR THE IMMEDIATE FUTURE AND BEYOND?

Looking at the evolution of the ICT industry worldwide, the acceleration of mobile broadband uptake is truly extraordinary. This technology continues to show the highest growth rate of any ICT, at over 30% per year. In fact, mobile broadband is growing faster than any technology in human history.

By the end of 2013, ITU predicts that mobile broadband subscriptions will exceed fixed broadband subscriptions by a ratio of 3:1.

I think the massive availability of this platform, combined with the new generations of 'digital natives' – children who have never lived without an ICT device of some kind – will drive the next wave of development. Our industry is moving so fast that even today's 'twentysomething' innovators will find it hard to predict the direction of tomorrow's advances. That's a challenge for organizations like ITU, which helps forge the global technical standards that make all this global interconnectivity possible. But it's also a wonderful time to be at the centre of this industry, because, even though it sounds like a cliché, almost anything really is possible!

I think we will also see increased engagement of and with youth. These young digital natives will soon represent the first generation of true 'digital citizens' – people who expect to conduct most of their interactions online, and who have a new way of working and collaborating through social media and other digital tools that is highly intuitive and very powerful. It is the future needs and the expectations of this digital generation that will set the agenda for government, industry and academia.

Governments will have to ensure they are fully accountable

as transparency becomes increasing important. They will also have to ensure that they put in place the networks and applications that can support the delivery of a whole host of services to citizens.

Industry needs to try to match the rapidly evolving needs and desires of this online generation, developing competitively-priced devices and services in an increasingly cut-throat market. The rise of the BRICs means even more competition, because all four of these nations have really prioritized ICT training. Each has a large and growing pool of young, entrepreneurial ICT professionals – we're already seeing many successful new ICT companies coming out of emerging markets.

Finally, academia has the challenge of tailoring its training to keep pace with the needs of business, and particularly the ICT industry. There's evidence that many ICT courses being run by universities are not teaching the kinds of skills today's employers need. We also have a lack of ICT engineers coming onto the job market in much of the developed world – the US and Europe are both predicting huge shortfalls of trained staff in years to come. The rise of online training through institutions like the Khan Academy could help make this a big opportunity for qualified ICT professionals from the developing world.

HOW OPTIMISTIC ARE YOU ABOUT THE WORLD ACHIEVING MILLENNIUM DEVELOPMENT GOALS BY 2015, INCLUDING ITU'S OWN AMBITIOUS TARGET TO 'CONNECT THE WORLD' BY 2015?

We have been incredibly successful over the past decade or so in connecting the world and bringing almost everyone within reach of the benefits of ICTs, and particularly mobile. By the end of this year there will be almost as many active mobile subscriptions globally as there are people. But we live in a world where two thirds of the world's people still have no access to the Internet. This means that two thirds of the world's people still have no access to the world's greatest library; no access to the world's most active marketplace; and no access to the world's greatest social gatherings. This is something we must work hard to change.

Today, we stand at a 'tipping point' – between the Internet as a vital enabler of social and economic progress in the industrialized world, and the Internet as a valuable global resource and a basic commodity of human life everywhere. As the planet comes online, broadband will change the world in a million ways – and as it does so, it will help us accelerate progress towards the Millennium Development Goals.

In a more populous, ageing world, broadband will be vital in helping to deliver essential services such as education, health, and good government. Broadband will also play a crucial role in ensuring the world's seven billion people have affordable and equitable access to adequate food supplies, at every step of the process: from delivering the right information to farmers; to helping them improve yields and prices; to improving supply chain efficiencies; to ensuring that consumers understand nutritional needs, both for themselves and for their children.

Similar principles apply to smart water management and distribution, and here too, broadband will play a vital role in the 21st century, as water resources become scarcer, and much more valuable. We will also see broadband helping drive the transition to a low carbon economy, and helping us better adapt to the effects of climate change, through smart grids; environmental sensors; intelligent transport systems; the dematerialization and digitalization of goods and services; and new ways of improving energy efficiency.

Broadband will not just help us address the biggest issues of our time, such as climate change and environmental sustainability; it will also revolutionize the way goods and services are created, delivered and used.

This is why ITU and UNESCO set up the Broadband Commission for Digital Development in 2010 – to advocate for increased broadband access and rollout globally; not just for its own sake, but to accelerate progress towards meeting the MDGs.

We now have close to 60 Broadband Commissioners – all leaders in their field – representing governments, industry, academia and international agencies, and they are doing great work in advocating the importance of policy leadership.

In 2011, the Broadband Commission set four ambitious but achievable targets, and the most important of these, in my opinion, is the one concerning affordability.

The Commission wants to see entry-level broadband services cost under 5% of monthly income in every country in the world by 2015. And I believe that we will succeed – with the help of enlightened regulation, increased user demand, and new technologies such as mobile broadband.

HOW DO YOU PERCEIVE THE STATUS OF BANGLADESH WITHIN THE GLOBAL CONTEXT OF ICT AND TELECOMMUNICATION'S EXPLOSIVE GROWTH?

Despite its economic challenges, Bangladesh has managed to spur healthy development of its ICT sector. The creation of a very competitive mobile telephone market has seen mobile subscriptions surpass 100 million in 2013. The strong growth in mobiles has been helped

enormously by the deregulation of the telecom sector and the open approach to foreign participation.

This progressive regulatory regime has also borne fruit in terms of Internet uptake, which is now growing quickly. With an estimated internet user-base of close to 10 million (7% user penetration) around end 2013, the number of people using the internet in Bangladesh has more than doubled in just three years. And while broadband Internet is still in its infancy, Bangladesh has started moving on a number of fronts into wireless-based services; an important move because the range of technologies on offer help overcome some of the infrastructure limitations that are serving as a barrier to great broadband uptake.

WHAT DO YOU VIEW AS THE GREATEST CHALLENGE TO ICT AND TELECOMMUNICATION GROWTH AT PRESENT?

ITU's Plenipotentiary Conference will be taking place in October of this year, and our membership has already kicked off the process to define our strategy for the years to come.

I believe that a key component of ITU's strategic planning process will be a clear understanding of the roles and responsibilities of the many different organizations that make up today's ICT ecosystem, and also the areas in which we can collaborate on and complement one another.

My vision is of a world where everyone is able to fully participate in the interconnected knowledge-driven economy and society – a world where everyone can exchange ideas, access healthcare and education, innovate and sell products and services, and stay in touch with family and friends.

This world will be connected by high-speed communications networks and supported by the appropriate underlying infrastructure and services – enabling governments, businesses, civil society, academia and every citizen to connect, build partnerships, collaborate and trade, as well as to address global challenges such as climate change and disaster mitigation.

And it will be a world in which the risks and downsides of participating in the global community are properly addressed, so that they do not overshadow the benefits to users – especially the most vulnerable, including children. A world which is fully-inclusive – regardless of physical ability, gender, income levels, or language spoken.

Neither ITU, nor any other single entity, can achieve this vision alone. It can only be brought about by a broad yet close collaboration between a multitude of global, regional, national and local stakeholders, and through the efforts of

all players, using our best skills, expertise and people.

There are c I e a r I y disagreements and differences of opinion on how various challenges on the way towards achieving this vision should be

BROADBAND WILL NOT JUST HELP US ADDRESS THE BIGGEST ISSUES OF OUR TIME, SUCH AS CLIMATE CHANGE AND ENVIRONMENTAL SUSTAINABILITY; IT WILL ALSO REVOLUTIONIZE THE WAY GOODS AND SERVICES ARE CREATED, DELIVERED AND USED

addressed. This is normal, given the nature of the rapidly-changing and increasingly complex world we live in.

Open, multi-stakeholder discussions remain a very healthy way for the international community to seek solutions to contemporary challenges. In a fast-moving, rapidly-evolving environment, there are no permanent or even long-term solutions. What works today will not necessarily work tomorrow. So this needs to be a continuous process, bringing all stakeholders to the table in an inclusive dialogue.

IT IS ACCEPTED BY POLICY EXPERTS GLOBALLY THAT GDP IS DRIVEN BY ICT AND THE INTERNET. WHAT IS YOUR VIEW ON THIS PHENOMENON?

The Internet is having a huge impact on the global economy, with businesses increasingly moving online, and billions of dollars' worth of online transactions taking place every week.

We are witnessing the very rapid virtualization of many goods – from books and films to music and software. With access to ICTs, the classroom is no longer limited to three-dimensional space for the dissemination of knowledge. Students have virtually limitless access to information, faculty, tutors and each other. Digital libraries and repositories make materials widely available. Learning environments now permit social interaction and community exchange to support the learning process.

Smartphones already comprise the great majority of handset sales in developed markets, and we can expect this trend to continue to spread rapidly into the developing world, especially with the imminent arrival of affordable home-grown smartphones and tablets in huge markets such as China, India and Africa.

Smartphone or tablet computer learning platforms leveraging cloud-computing technologies will continue to grow in importance. Examples include Apple's iCloud and Amazon's Kindle Fire tablet leveraging Amazon's cloud platform. Ubiquitous global access to the best-in-class learning materials will become a reality for millions of new learners.

Globally, manufacturing increasingly depends on the very short supply chain management processes that only the Internet can make possible.

The increasing availability of ubiquitous high-speed broadband connections and the establishment of an effective online presence will allow businesses – and particularly small businesses, and not-for-profit organizations – to participate in a global marketplace.

We are also seeing unprecedented collaboration online when it comes to research and development.

HOW ITU CAN HELP BANGLADESH FOR FURTHER DEVELOPMENT IN TELECOMMUNICATION SECTOR?

ITU's Telecommunication Development Bureau is dedicated to working hand in hand with ITU Member States to support tailored strategies and initiatives that mesh with each country's development needs and priorities. We are proud to have two Internet Training Centres located in Bangladesh – at BRAC University in Dhaka, and Shahjalal University of Science and Technology in Sylhet. ITU and a team of experts from IMPACT, our cybersecurity

DR HAMADOUN I. TOURÉ, SECRETARY-GENERAL OF THE INTERNATIONAL TELECOMMUNICATION UNION (ITU) SINCE JANUARY 2007, WAS RE-ELECTED FOR A SECOND FOUR-YEAR TERM IN OCTOBER 2010

As Secretary-General, Dr Touré is committed to ITU's mission of connecting the world, and to helping achieve the Millennium Development Goals through harnessing the unique potential of Information and Communication Technologies (ICTs).

A long-standing champion of ICTs as a driver of social and economic development, Dr Touré previously served as Director of ITU's Telecommunication Development Bureau (BDT) from 1998-2006. In this role he placed considerable emphasis on implementing the outcomes of the World Summit on the Information Society (WSIS), launching projects based on partnerships with international organizations, governments, the private sector and civil society.

Dr Touré started his professional career in his native Mali in 1979. He built a solid career in the satellite industry, serving as managing engineer in Mali's first International Earth Station. He joined Intelsat's Assistance and Development Programme in 1985. He was appointed Intelsat's Group Director for Africa and the Middle East in 1994, earning a reputation as an energetic leader through his commitment to various regional connectivity projects such as RASCOM. In 1996 he joined ICO Global Communications as African Regional General Manager, spearheading the companies' activities across the African region.

A national of Mali, Dr Touré holds a Masters Degree in Electrical Engineering from the Technical Institute of Electronics and Telecommunications of Leningrad, and a PhD from the University of Electronics, Telecommunications and Informatics of Moscow. He is married with four children and two grandchildren, and is proficient in four official ITU languages:

arm, also carried out readiness assessment of cybersecurity in Bangladesh and four other Least Developed Countries in the South Asia, to review the institutional and regulatory framework, existing critical information infrastructure, and recommend suggestions for establishing a Computer Incidence Response Team (CIRT).

We are committed to continuing to work with the Bangladesh authorities and local industry players to further assist wherever we can in spurring accelerated development of the country's ICT sector – and particularly broadband – which will be a key driver of future growth.



WHEN WE LOOK AT **TELECOMMUNICATION TODAY, WE** SEE THAT A HUGE NUMBER OF **PEOPLE, MACHINES AND DEVICES – NOT ONLY CONFINED** TO ICT DEVICES BUT DEVICES FROM ALL WALKS OF HUMAN **LIFE - ARE BEING CONNECTED** AND MOBILE TELECOMMUNICATION HAS BEEN THE CATALYST FOR SUCH A PHENOMENON, HOW DO YOU THINK THIS TREND WILL **EVOLVE IN THE NEAR FUTURE?**

Opportunities for mobile technology to impact on people's everyday lives will become increasingly exciting as we move towards a Connected Life, where nearly everything and everyone are connected. The reach of mobile technology will continue to extend into industry sectors such as health, automotive, commerce, education, government and utilities.

There are already a number of successful initiatives in Bangladesh where the mobile network has been instrumental in providing valuable and much-needed services in the areas of health and education to underserved communities. For example, the Aponjon programme (operated by the Mobile Alliance for Maternal Action and founded by the United States Agency for International Development and Johnson & Johnson) delivers information to health workers via mobile devices. Through this programme, pregnant women can also receive SMS or voice messages with prenatal advice appropriate to their gestation stage.

There is no doubt that one of the main reasons for maternal and infant deaths around the world is a lack of information and access to basic healthcare. So if we can use mHealth solutions to educate and inform community workers as well as pregnant women of relevant health-related information, this will go a long way towards addressing this global problem. According to our research, mobile-assisted education of traditional birth attendants reduced perinatal mortality by 30 per cent. (Source: GSMA Mobile Economy Asia Pacific 2013, page 37).

WHAT WILL BE GSMA'S STRATEGIC ROLE IN ENHANCING MOBILE TELECOMMUNICATION GROWTH IN THE ASIA PACIFIC?

One of the GSMA's major goals is to see more people connected to the mobile Internet. To make this a reality, we are working closely with policy makers and regulators in the Asia Pacific region, sharing with them regulatory best practice in the area of spectrum management. Introducing policies that facilitate the availability of harmonised spectrum for mobile Internet will help deliver a number of key benefits. From a national perspective, an increase in mobile broadband penetration will have a substantial impact on the economic growth of a country. For example, a recent World Bank study showed that a 10 per cent increase in mobile broadband penetration can drive a 1.4 per cent increase in GDP for low- to middle-income countries. The widespread deployment of mobile broadband could create 25 million jobs around the world and boost global GDP by three to four percent.

Mobile networks require significant and sustainable long-term investment, so a clear and transparent spectrum management framework will greatly strengthen investor confidence in the market and help drive healthy investment in the sector. The GSMA has been helping governments in Asia Pacific to implement spectrum roadmaps to analyse the existing spectrum needs (at least five years into the future), and consequently set out medium to long-term goals for spectrum management and planning. A spectrum roadmap should form an integral part of the Digital Bangladesh vision and it will also provide an excellent platform for stakeholders to participate in the process.

GSMA RECENTLY ANNOUNCED
THAT IT WILL BE COLLABORATING
WITH THE ITU IN A PROGRAM TO
BE KNOWN AS "M-POWERING FOR
MOBILE BROADBAND" TO
ENCOURAGE THE DEVELOPMENT
OF MOBILE BROADBAND IN THE
ASIA PACIFIC REGION. CAN YOU
TELL US MORE ABOUT THE CORE
CONCEPTS BEHIND THIS PROGRAM
AS WELL AS HOW IT WILL BENEFIT
A COUNTRY LIKE BANGLADESH?

We have a strong working relationship with the ITU (International Telecommunication Union) and engage with them on a number of levels. For example, I work very closely with the ITU as a Commissioner in their Broadband Commission for Digital Development where we aim to boost the importance of broadband on the international policy agenda.

The joint ITU-GSMA programme, 'mPowering For Mobile Broadband', is designed to facilitate the exchange of experiences and sharing of best practices in specific policy areas. Our focus is on encouraging investment in mobile broadband infrastructure, instilling consumer confidence in mobile applications and supporting the long-term growth of the sector. At this stage, we are working with the ITU to identify potential partners and participating governments and would certainly welcome the opportunity to work with the Bangladeshi Government.

WHAT DO YOU THINK WILL BE THE NATURE OF COMPETITION IN THE GLOBAL ICT AND MOBILE TELECOMMUNICATION MARKET IN COMING YEARS?

Ensuring the global ICT and mobile industry remains competitive is vital if it is to remain a vibrant and innovative industry. However, a trade-off exists between increased competition and the leveraging of economies of scale. In some countries, network sharing agreements or joint ventures are already enabling efficiencies but in many markets there will be a need to reducing the number of network operators — ideally via con-solidation or alternatively via exits.

Finding the right regulatory balance and allowing increased cross-border consolidation within fragmented markets is kev to the future healthy development of the worldwide mobile industry.

ACCORDING TO OUR
RESEARCH,
MOBILE-ASSISTED
EDUCATION OF
TRADITIONAL BIRTH
ATTENDANTS
REDUCED
PERINATAL
MORTALITY BY 30
PERCENT

BANGLADESH HAS BEEN ENJOYING EXCITING GROWTH IN MOBILE TELECOMMUNICATION IN THE PAST YEARS, YET THE **GROWTH IS FACING CHALLENGES** LIKE DIFFICULT TAX REGIME, HIGH LICENSING FEES AND LOW TARIFF **ETC. HOW DO YOU THINK THE COUNTRY CAN OVERCOME THESE CHALLENGES AND HOW CAN GSMA ASSIST IN THIS AREA?**

A vibrant mobile telecom sector brings vast social and economic benefits to a country such as Bangladesh. However issues such as high taxation and spectrum licence fees are barriers to reaping the full benefits of mobile. For example, Bangladesh has significantly higher mobile sector taxes compared to other Asia Pacific markets. Compared to a regional average of 30 per cent, the corporate tax rate in Bangladesh is as high as 35-45 per cent. VAT rates on mobile services are also higher; 15 per cent in Bangladesh, compared to a 10 percent regional average. (Source: GSMA Mobile Economy Asia Pacific 2013, page 112)

These challenges adversely impact on the ability of companies to invest in infrastructure, which in turn affects mobile penetration and the level of usage of mobile services. We urge policymakers to drive growth in the mobile sector via tax reforms and setting realistic prices for spectrum. These actions will create a more supportive environment for telecoms investment to continue the success story of mobile in Bangladesh and ensure that affordable voice and data services are made available to all its citizens.

HOW DO YOU THINK AMTOB. **BEING THE TRADE ORGANIZATION** FOR MOBILE TELECOM INDUSTRY IN BANGLADESH, MAY CONTINUE **ASSISTING THE INDUSTRY IN A MORE DYNAMIC WAY?**

As the trade organisation for the mobile telecoms sector in Bangladesh, I believe AMTOB has an important role to play in co-ordinating the views

ANNE BOUVEROT IS THE DIRECTOR **GENERAL OF GSMA AND A MEMBER OF ITS BOARD**

Anne brings to the GSMA a wealth of experience and a proven track record of success in the highly dynamic mobile industry. With a deep understanding of the opportunities and the challenges facing mobile operators today, she leads the GSMA as the essential industry partner for its operator members around the world, enabling their continued success through driving innovation, providing thought leadership and advocating for the industry.

Before joining the GSMA, Anne was Executive Vice President for Mobile Services for France Telecom where she defined the strategic transformation programmes for a business serving more than 120 million customers and revenues of more than 14 billion euros at the time.

Prior to France Telecom Orange, Anne led a 600-person business unit of Equant and was responsible for developing IT services for Equant's multinational business customers. She began her career in telecommunications as project manager for Telmex in Mexico in 1991.

Anne holds M.S. and Ph.D. degrees in mathematics and computer science from the Ecole Normale Supérieure in Paris and an M.S. degree from Telecom Paris. Anne was appointed as a member of the Broadband Commission for Digital Development in 2013. She also served as a non-executive director of Capgemini, a leading global provider of consulting, technology and outsourcing services, and as a non-executive director of Edenred, the world leader of prepaid corporate services.

of the industry so that they can be effectively communicated to the government. In addition, publication of journals such as this helps to share important information about the mobile industry. This enables wider stakeholder groups to better understand our sector and the diverse services that mobile operators are providing to the people of Bangladesh.

INVESTORS' VIEW





Manoj Kohli Managing Director and Chief Executive Officer (International) Bharti Airtel Limited

Ahmed Abou Doma Group Executive Vice President Head of the Asia and Africa Business Unit and Chief Executive Officer of Global Telecom Holding







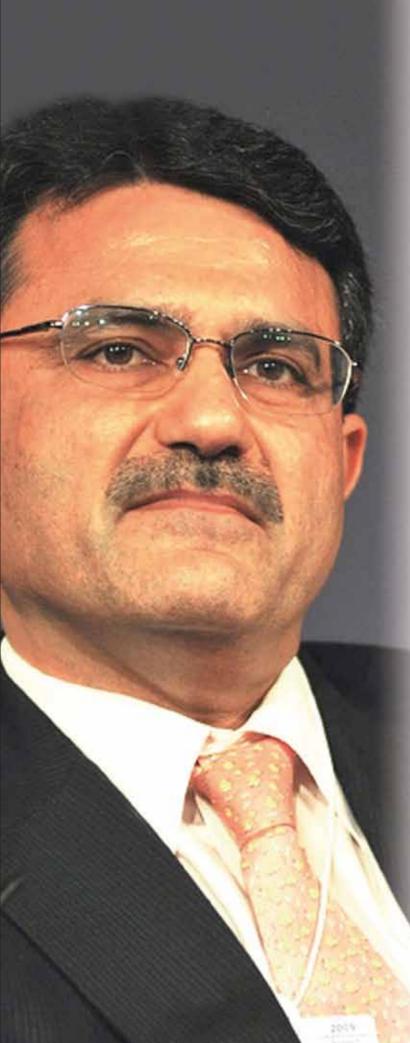


Sigve Brekke Executive Vice President and Head of Asia Telenor Group

Jamaludin Ibrahim Managing Director, President & Group Chief Executive Officer Axiata Group Berhad









I BELIEVE THAT IN
THIS DECADE
THE GLOBAL
TELECOM INDUSTRY,
IN PARTICULAR
THE EMERGING
MARKETS, WILL SEE
A MASSIVE WAVE
OF GROWTH LED
BY DATA SERVICES

Manoj Kohli

Managing Director & CEO (International)

Bharti Airtel Limited

AIRTEL HAS TRANSCENDED OTHER MARKET PLAYERS WITHIN A SHORT SPAN OF TEN YEARS. WHAT HAVE BEEN THE KEY FACTORS OF THIS GLORIOUS SUCCESS?

Airtel began its journey in 1995 by launching services in India's capital city. Since then it's been a very gratifying journey that has seen the Company become the fourth largest mobile operator in the world with operations in 20 countries and over 280 million customers. I would say the biggest contributors to the success of this journey have been our unique business model based on outsourcing that allowed us to build global scale and offer world-class vet affordable services to customers and our nimbleness ensured that when it came to on-ground execution of strategy, we were ahead of the curve. Secondly, our constant focus on product innovation has ensured that Airtel customers are always delighted. And last but most important, our people and our focus on building great teams, have helped us achieve all that we have.

AIRTEL HAS A SPECIAL FOCUS ON THE YOUTH MARKET. WHAT IS THE PRIMARY REASON OF HAVING A PASSION FOR THIS SEGMENT?

Considering we started off in 1995, we are a young Company ourselves. I would like to think of us as a teenager who is full of energy and optimism. If we look at the markets where we are present - be it South Asia or Africa there is а massive demographic dividend and one of the largest pools of youth population in the world. Telecom has become an enabler of lifestyle and economic growth, and allows the youth to connect and express themselves. Airtel will always be this enabler and continue to connect with the youth and we see this segment as a key growth driver for the Company.

WHAT DO YOU THINK WILL BE THE NATURE OF COMPETITION IN THE GLOBAL MOBILE TELECOMMUNICATION MARKET IN COMING YEARS?

Clearly, the future of the industry is data. We are going through a phase of consolidation given what the global economy has gone through over the past few years and the maturing of technology ecosystems such as LTE etc. I believe that in this decade the global telecom industry, in particular the

emerging markets, will see a massive wave of growth led by data services – 3G, 4G, Mobile Commerce etc. Wireless will lead the growth of internet and millions will have their first experience of internet on a mobile device.

WHAT IN YOUR OPINION ARE THE OPPORTUNITIES FOR BANGLADESH TELECOM INDUSTRY IN THE NEAR FUTURE?

Bangladesh has massive potential to grow telecom services, particularly in rural areas. The launch of 3G services in the country is a big step for the industry and will go a long way towards bridging the digital divide in Bangladesh and supporting economic growth. However, higher taxation and duties on equipment telecom services are impediments to the overall growth of this sector. Success of 3G depends largely on the 3G compatible devices and affordability of the customers to avail these devices. In order to facilitate the growth in telecom, Government needs to come forward with a long term policy road map to ensure level playing field among various telecom service providers. Airtel, has already invested in bringing services to the mass with affordable prices and innovative product portfolio. High speed data services on 3G networks and mobile commerce are areas that should see future investments and growth opportunities.

HOW DO YOU THINK AMTOB, BEING THE MOBILE TELECOM HUB IN BANGLADESH, MAY PLAY AN EFFECTIVE ROLE IN PROPELLING THE INDUSTRY FORWARD?

Association of Mobile Telecom Operators of Bangladesh (AMTOB), played has constructive role in the growth of the country's mobile telecom sector and has been the voice of the industry. The organization should continue to provide a platform for dialogue on important industry issues amongst all stakeholders.

AIRTEL WILL
ALWAYS BE
THIS
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AND
CONTINUE
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AND
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A
KEY GROWTH
DRIVER FOR
THE
COMPANY



WOULD TAKE A QUANTUM LEAPIN DELIVERING THIS KEY OBJECTIVE TO OUR CUSTOMERS

Ahmed Abou Doma

Group Executive Vice President Head of the Asia and Africa Business Unit and Chief Executive Officer of Global Telecom Holding

WHAT IS THE GLOBAL STRATEGY OF GTH IN TERMS OF GROWTH IN THE NEXT THREE YEARS?

We have specific strategies for different markets. We want to continue maintaining leadership in the markets where we are already leading, as well as having our fair share in subscribers and revenue in the rest. More and more, the shift is focusing on total customer experience and fulfilling customer expectations is the core of our strategy moving forward. Customers now have different communication need, hence building a state of the art network is vital to facilitate the wave of data boom due to the advent of 3G, 4G/LTE and other emerging technologies.

WHAT WILL BE THE NATURE OF COMPETITION IN THE MOBILE TELECOMMUNICATION MARKET IN COMING YEARS?

The nature of competition will be different than in the last decade as new and emerging technologies will be at the forefront and not just voice. Although voice will continue to be the dominant offering, the main competition will be in the areas of data, apps, and services that target the youth population as a whole. There will be hidden competition in terms of cost effectiveness including continuous competition of new and young subscribers who join the addressable market every year.

BANGLADESH HAS BEEN ENJOYING EXCITING GROWTH IN MOBILE TELECOMMUNICATION IN THE PAST YEARS. YET THE GROWTH IS FACING CHALLENGES LIKE DIFFICULT TAX REGIME, HIGH LICENSING FEES AND LOW TARIFF ETC. HOW, FROM THE

VIEWPOINT OF GLOBAL TELECOM HOLDING AND BANGLALINK, DO YOU THINK THE COUNTRY CAN OVERCOME THESE CHALLENGES?

The first thing to realize is the mobile industry is a key economy driver in developing countries. Several world class researches have shown the significant contributions of the mobile industry in enhancing the GDP of a country. There should be policies in place for a long time, so that operators can invest and then be ready to reap the harvests. This is then the time when the next generation of investments will take place and operators need to be ready and cash rich at that point, to make the investments for tomorrow. In Bangladesh, we are now targeting the bottom of the pyramid in terms of subscriber acquisition. So policies need to be favorable so that we can ensure connectivity in the most affordable manner.

HOW BANGLALINK, AS BEING A BIG BRAND IN BANGLADESH, IS PLANNING TO PROMOTE MOBILE BROADBAND THROUGH 3G SERVICE?

We are very excited about 3G from the beginning and have gone to great lengths to ensure fast and efficient rollout in the least possible time. We are beginning to see results as we have great quality of coverage in the areas where Banglalink has rolled out 3G network. However, we must also keep in mind the practical constraints as 3G roll out needs to be business viable for us, since 3G enabled handset penetration needs to keep up with the pace of overall network expansion. Internet penetration in Bangladesh is mostly driven by mobile connectivity and having 3G will definitely eliminate the needs for expensive fixed setups in 3G coverage areas. If we promote this important requirement to deliver high speed internet connection to the masses, I think we would take a quantum leap in delivering this key objective to our customers.

WHAT WOULD BE YOUR INVESTMENT GOALS IN BANGLADESH IN THE COMING YEARS?

We will continue to invest so that our customers get the best levels of services. As our customers grew exponentially over the last couple of years, we have also rolled up our sleeves and worked hard to ensure the best for them. In many cases we have prioritized network coverage enhancements to the forefront, channeling hard earned revenue in this vital area. I would like to reiterate an important observation in this area - if SIM tax is withdrawn, then our costs would go down dramatically and this opportunity can then be exploited to further improve and expand network.

IN YOUR OPINION WHAT OPPORTUNITIES ARE THERE FOR BANGLADESH TELECOM INDUSTRY IN THE NEAR FUTURE?

The possibilities for Bangladesh are immense as far as the telecom industry is concerned. We have so far only explored voice in this market whilst we are slowly seeing the introduction of other emerging and non-voice technologies. These need to be exploited to their full potential and at the same time Bangladesh is also ready to embrace the next generation of products and services. Internet connectivity, data, VAS, 3G, Mobile Financial Services are some of the areas where I see the possibilities to be literally limitless.

HOW DO YOU THINK AMTOB, BEING THE TRADE ORGANIZATION FOR MOBILE TELECOM INDUSTRY IN BANGLADESH, MAY CONTINUE ASSISTING THE INDUSTRY IN A MORE DYNAMIC WAY?

AMTOB is a crucial body for the mobile industry - it is the platform through which we collate all our issues and make our voices heard to our valued stakeholders. The telecom industry is a huge revenue generating area for government and we want to reiterate that we are always there to work side by side and as a partner. AMTOB can go a long way in facilitating this important vision. I am very happy to have seen the way AMTOB has progressed and transformed itself in the role for which it was envisioned for. We have accomplished several key milestones with AMTOB and I hope we can continue to grow together in the future.

IN BANGLADESH, **WE ARE NOW TARGETING** THE BOTTOM OF **THE PYRAMID** IN TERMS OF **SUBSCRIBER ACQUISITION. SO POLICIES NEED TO BE FAVORABLE SO THAT WE CAN ENSURE** CONNECTIVITY IN THE MOST **AFFORDABLE** MANNER.



WE OFTEN TALK ABOUT BANGLADESH AS A GREAT EXAMPLE OF HOW YOU CAN GO FROM NEARLY ZERO MOBILE COVERAGE TO A NATIONWIDENETWORK IN ONLY A FEW SHORT YEARS

Sigve Brekke

Executive Vice President and Head of Asia, Telenor Group

WHAT IS THE GLOBAL STRATEGY OF TELENOR IN TERMS OF GROWTH IN THE NEXT THREE YEARS?

In October 2013, Telenor Group launched a new global strategy and a new vision for the years ahead. Telenor's vision is to Empower Societies - which emphasizes the company's long-term commitment to the markets where it operates. It's not only customers who should benefit, but also society at large. The vision is supported by three strategic pillars: Internet for All, Loved by Customers and Efficient Operations. We believe that in the coming years, understanding how to connect everyone is imperative for both the industry and local governments. Meanwhile, it is also critical for our growth to understand customer needs, continue to innovate and maintain cost-efficient operations.

WHAT CHALLENGES DO YOU ENCOUNTER OR FORESEE IN THE MARKETS WHERE TELENOR OPERATES?

Telecommunication is a primary industry in any country - as important as electricity, water and financial services. The natural resource we rely upon radio waves - are renewable but also a scarce resource. In most markets where we operate, we depend on the local government's ability to understand how to regulate and develop this resource to the benefit of everyone in the country. Another challenge we see is keeping up with rapidly changing consumer behavior. As an operator, we need to understand, adapt to and rapidly develop our services based on what the customers are interested in. Right now, we are experiencing an explosion of interest in data-based services in most of our markets, including in Bangladesh where Grameenphone launched high-speed internet access via 3G in October 2013. But it's also important to keep the focus on the long-term. What will this landscape look like in 5-7 years? We will probably have 4G and even 5G up and running in many of our markets, but it's hard to predict what kind of user behavior we will see by that point. For all we know, Facebook, Twitter and Instragram might be fads of the past by that point and replaced by something very different.

O

WHAT WILL BE THE NATURE OF COMPETITION IN THE GLOBAL MOBILE TELECOMMUNICATION MARKET IN COMING YEARS?

We believe that it all comes down to two things: customer understanding and business culture. The operator with the best understanding of customers will be able to develop and adapt more efficiently than its competitors. However, in order to truly differentiate in an industry where everything else is equal, you have to develop a strong, passionate and sustainable internal business culture. Technology only takes you some of the way; it's your people who win the battle.

BANGLADESH HAS BEEN ENJOYING EXCITING GROWTH IN MOBILE TELECOMMUNICATION IN THE PAST YEARS. YET THE **GROWTH IS FACING** CHALLENGES LIKE **DIFFICULT TAX REGIME,** HIGH LICENSING FEES AND LOW TARIFF ETC. HOW, FROM THE VIEWPOINT OF **TELENOR AND GRAMEENPHONE, DO YOU** THINK THE COUNTRY CAN **OVERCOME THESE CHALLENGES?**

We often talk about Bangladesh as

a great example of how you can go

from nearly zero mobile coverage

to a nationwide network in only a few short years. A key reason for this tremendous progress has been successful collaboration the between MoPT, the regulator and the mobile operators. Looking forward, for a long-term investor such as Telenor we are dependent predictable business а framework and that transparent and fair processes are in place. Clearly, telecommunications has contributed to promoting social economic growth and Bangladesh since the late 1990s. Fact: In 2012 Grameenphone contributed a total of BDT 53 billion in tax revenue, which constituted 64 percent of the total tax contribution from the mobile industry. However, as an industry

heavily reliant on

government

effective

and

policies

regulations, we believe that the

lack of political and regulatory predictability creates unnecessary barriers for growth.

GRAMEENPHONE IS PRESENTLY THE MARKET LEADER IN THE SECTOR. WHAT WOULD BE YOUR INVESTMENT GOALS IN BANGLADESH IN THE COMING YEARS?

Telenor Group recently confirmed its long term commitment to Bangladesh when we took part in the 3G auction. We plan to continue to invest in Bangladesh in the years to come, but we do expect improvements in how the industry is regulated and taxed.

TELENOR HAS BEEN
COLLABORATING ON
RESEARCH ON IMPORTANT
ISSUES RELATED TO
MOBILE
TELECOMMUNICATION
WITH LEADING
INSTITUTIONS SUCH AS
HARVARD UNIVERSITY,
MIT ETC. COULD YOU
PLEASE TELL US A LITTLE
ABOUT THE KEY FOCUS OF
THE RESEARCH
ACTIVITIES?

Telenor drives innovation across three horizons, including the expansion and strengthening of our core business the development of new business and the creation of options for future business. Through a customer centric approach, we constantly seek ways to create value for our customers. The open innovation system is part of this. We also create new business opportunities for future growth, like Mobile Financial Services and the Internet of Things. Our investments in new technologies and processes will create new options and operational performance. In 2013, Telenor established partnerships with a few significant research centres in the USA, Harvard and MIT Media Labs included. With Harvard common research aims to ramp up social network analysis to the next level by finding clusters and missing links. Together Media Labs of Massachusetts Institute of Technology (MIT), Telenor works on the project that uses big data to predict customer's personality.

WHEN DO YOU THINK THE RECENTLY INTRODUCED 3G SERVICE IN BANGLADESH WILL BE FULLY FUNCTIONAL AND PROVIDE EXPECTED BENEFITS INCLUDING WIDESPREAD USE OF BROADBAND INTERNET?

Grameenphone launched commercial 3G services in October 2013. The ambition is to cover all major district cities with a 3G network by next spring (2014). A fast and extensive roll-out of 3G services important is an contribution to realizing the Government ambitions for a "Digital Bangladesh". Our mission is to provide quality Internet services for the Bangladeshi population. Not only will this provide increased growth, but also provide access to new services within the health, educational and banking sectors.

HOW DO YOU THINK AMTOB, BEING THE TRADE ORGANIZATION FOR MOBILE TELECOM INDUSTRY IN BANGLADESH, MAY CONTINUE ASSISTING THE INDUSTRY IN A MORE DYNAMIC WAY?

AMTOB has successfully managed to provide an arena for the mobile industry to interact with relevant stakeholders and in recent years it has played an important role in discussions on the challenges facing the industry. Looking forward, I am confident that AMTOB will continue to be as forward leaning, competent and dynamic as its members in keeping up with emerging trends and new challenges on the horizon.

TELECOMMUNICATION
IS A PRIMARY
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UPON - RADIO
WAVES - ARE
RENEWABLE BUT ALSO
A SCARCE RESOURCE.



CURRENTLY MORE THAN 10% OF ROBI'S EMPLOYEES **ARE INVOLVED IN OUR DEVELOPMENT PROGRAMME**

Jamaludin Ibrahim

Managing Director

President & Group Chief Executive Officer, Axiata Group Berhad

WHAT IS THE GLOBAL STRATEGY OF **AXIATA GROUP IN TERMS OF GROWTH** IN THE NEXT THREE YEARS?

Axiata's strategy for growth will be to focus on three key areas. Revenue growth via:

•Core business, which includes voice and SMS, focusing on our developing and high growth markets such as Bangladesh, India and Sri Lanka for subscriber growth •Mobile data in our more matured markets such as Malaysia and Indonesia •New services in the digital space, such as mobile money, mobile advertising and m-health ·Consolidation and potential new footprint where it makes strategic sense and is financially justifiable

Cost Reduction in:

•Infrastructure, by optimizing our passive assets such as the tower business. This will be done via tower sharing and collaboration with other industry players as well as by looking at new methods of optimization •Improved productivity •Procurement, by further consolidation across the group

Enhancement of key enablers via:

•Optimized synergies across the Group •Improved IT systems •Shared best practices •New business models

YOU HAVE BEEN FOCUSING ON HIGH **GROWTH AND LOW PENETRATION EMERGING MARKETS IN THE ASIA-PACIFIC.** WHAT CHALLENGES DO YOU ENCOUNTER OR FORESEE IN THESE MARKETS?

Whilst our emerging markets offer great potential in subscriber growth it also poses some unique challenges. These include regulatory, pricing and competition as well as finding talent with the right skill sets.

WHAT WILL BE THE NATURE OF COMPETITION IN THE GLOBAL MOBILE TELECOMMUNICATION **MARKET IN COMING YEARS?**

Most markets in the region are fully or nearly fully penetrated already and, with increased competition putting pressure on price, we have seen growth tapering off. This is especially so in more advanced markets such as Malaysia. Added to this, we have been experiencing competitive pressure from OTT players such as in the messaging space, putting pressure on our SMS business. Meanwhile, although data usage has been growing significantly, it requires large capex investments where

returns will only come later. We are thus reshaping our traditional business through carrier collaborations and right cost network initiatives, while exploring new growth opportunities in the digital services space. This will include collaborating with OTT global players as well.

BANGLADESH HAS BEEN ENJOYING EXCITING GROWTH IN MOBILE TELECOMMUNICATION IN THE PAST YEARS. YET THE GROWTH IS FACING CHALLENGES LIKE DIFFICULT TAX REGIME, HIGH LICENSING FEES AND LOW TARIFF ETC. HOW, FROM THE VIEWPOINT OF AXIATA AND ROBI, DO YOU THINK THE COUNTRY CAN OVERCOME THESE CHALLENGES?

In Axiata's view the country must take a long term view of development and growth of the industry. Faster growth of the telecommunications industry at a lower cost will stimulate the economy further and encourage more investment in the country. Bangladesh could take a number of specific steps to improve its attractiveness to investors such as: ·maximising the amount of mobile spectrum available to operators on non-discriminatory terms and at lower prices. The last auction proved that the price is not attractive enough to stimulate more investment into the market •allowing operators to re-structure sharing national resources such as tower and backhaul infrastructure and spectrum •removing barriers to foreign investor participation across communications related and markets - rather than seek to narrow operators' participation as it has done in the past.

We very much support the draft New Telecom Policy and look forward to seeing reform of the sector based on the final version.

DURING THE YEAR 2010-2013 ROBI IN BANGLADESH HAS MADE SIGNIFICANT INVESTMENT. WHAT WOULD BE YOUR INVESTMENT GOALS IN BANGLADESH IN THE COMING YEARS?

We have invested over USD500 million in capex alone in the last 3 years. This has mainly been on building the 2G network both in

coverage and capacity which is still the core revenue earner for the company. Moving forward, we will be investing further in terms of geographic coverage and the deployment of 3G.

AXIATA/ROBI HAS BEEN EMPHASIZING TRAINING AND TALENT DEVELOPMENT FOR TELECOM PROFESSIONALS. COULD YOU PLEASE GIVE US AN IDEA OF CURRENT ACTIVITIES AS WELL AS FUTURE PROGRAMS IN THIS AREA?

In Axiata Group, we have a robust programme to manage and develop our identified talents to increase both their leadership and functional or technical capabilities. This programme is extended to all our operating companies, including Robi.

As a group, we spend about USD30 million in learning and development every 3 years, covering our employees across the Group. Being part of the Robi's talent Group, enjoys world-class development programmes, jointly developed by Axiata and INSEAD, and facilitated by INSEAD at its campus in Singapore as well as many other programmes being delivered by severa carefully-selected training partners. These include a Telco mini-MBA and Business Simulation programmes by Coleago Consulting. Via these progrāmmes, world-class Robi's talent would have benefitted from deepening their industry knowledge, their leadership competencies such Strategic Thinking, Business Acumen, and also their execution capabilities.

Also as part of the development we invest in our talent programme to ensure that employees get the right experiences as they progress in their career and to ensure that this is as wide and diverse as possible. Some of these experiences are done through inter-company assignments across the Axiata Group footprint, where Robi's talent have been put through international assignments. Currently more than 10% of Robi's employees are involved in our development programme.

IN YOUR OPINION WHAT OPPORTUNITIES ARE THERE FOR THE BANGLADESH TELECOM INDUSTRY IN THE NEAR FUTURE?

Voice will remain a key driver of growth for this industry for a while

longer whilst SMS, given the limitation on script and local language support will potentially remain low. Data, currently significantly underpenetrated, represents a great opportunity and will eventually become a main driver of growth as voice starts to come to a saturation point. Saying that however, penetration levels in Bangladesh have still not reached 100% and with a growing economy market offers opportunity for growth.

Opportunities remain untapped in the under-served areas (current mobile penetration rate is more than 70% though true penetration is less than 50%) and in the digital services arena, there are opportunities in entertainment, payment and e-commerce to be explored further.

Robi remains a major growth driver within the Axiata group and is now the 3rd largest contributor in terms of revenue and EBITDA to the group.

HOW DO YOU THINK
AMTOB, BEING THE TRADE
ORGANIZATION FOR
MOBILE TELECOM
INDUSTRY IN BANGLADESH,
MAY CONTINUE ASSISTING
THE INDUSTRY IN A MORE
DYNAMIC WAY?

Axiata believes that mobile operator trade organizations are a very useful way for the industry to facilitate communication with government, regulators and other national stakeholders. We see AMTOB as a critical component of industry development.

In particular, where issues are not subject to direct competition between operators then an industry association such as AMTOB is well placed to act as a coordinating forum for the industry. This can streamline national policy dialogue and make it easier for all stakeholders to understand each other's positions and reach mutual accommodation.

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MOBILE WORLD CONGRESS

TRULY A GLOBAL EVENT

True to its name" Mobile World Congress", is a global event. Year over year, the GSMA Mobile World Congress (MWC) has attracted the largest number and highest-quality attendees of any event in the mobile industry.

Mobile World Congress (MWC), which has been taking place at Barcelona, Spain since 1987, was another record-breaking event in 2013 graced with more than 72,000 attendees from all across the globe. More than 41,000 C-Level leaders comprising of more than 4,300 CEOs in attendance, nearly 1,700 exhibitors utilizing 94,000 net square meters of exhibition and business meeting space decorated the event. As many as 3,400 press members representing 1,500 media outlets from 79 countries are expected to attend this year's MWC.

As the mobile industry continues to diversify, how will the roles of the traditional and emerging members evolve and with what impact? In 2014, the Mobile World Congress Conference program will examine the present and debate the future of our industry with in-depth analysis of the trends that are shaping it. The theme of this year, "Creating What's Next" is scheduled to take place between February 24 and 27. Running across the full length of the Mobile World Congress, the 2014 Conference program will continue to be a central focus of the event, challenging and educating attendees whilst covering the latest technological developments, next-generation services and growth strategies. From the keynote program to topic-focused conference sessions, thought leaders from the most dynamic companies in the mobile industry will be present at the event.







The Mobile World Live keynotes will once again feature the industry's leading lights, who will be sharing their visions for the future of mobile technology. These special stand-alone afternoon sessions are a break from the traditional format, and are the only Mobile World Congress conference sessions to be broadcast over the internet and via Mobile World Live TV. To name a few, this year's speaker list includes Facebook founder and CEO Mark Zuckerberg, President and Chief Executive Officer of IBM Ginni Rometty, CEO of Alcatel-Lucent Michel Combes, Chairman and CEO of AT&T Randall Stephenson, Chairman & CEO Cisco John Chambers and Jon Fredrik Baksaas, President & CEO of Telenor Group and Chairman of GSMA.

Many companies not directly involved in mobile business but developing products and applications for mobile industry are also attending the MWC with their new innovation e.g. Dolby Laboratories, Mirrorlinks etc. Car Connectivity Consortium will join the MWC 2014 for a second year. Devcon will offer everything you need to know, to efficiently create and deploy the world's next generation of connected-car apps, whether they are drive-aware versions of the ones we know and love or apps built specifically to enhance the connected driving experience. MirrorLink offers a one-stop-shop for interoperability between today's most popular smartphones and cars. At MWC, the entire mobile ecosystem will have its eye on businesses that will transform mobile lifestyles.

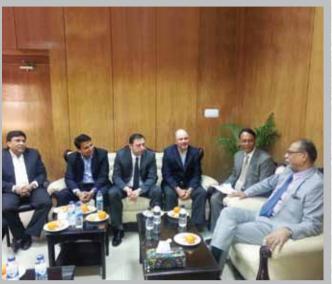
In this year's MWC, two Bangladeshi eminent personalities will take part as panel discussants. Bangladesh Telecommunication Regulatory Commission (BTRC) Chairman Sunil Kanti Bose will be a panellist in a thematic workshop titled "Spectrum License Renewal" on February 24, 2014 at 3:30 p.m. (Barcelona time) while Secretary of Information and Communication Technology Division Md. Nazrul Islam Khan will be a panellist at another thematic workshop titled "Mobile Identity" to be held on February 26 at 12 noon.





AMTOB ALBUM











AMTOB ALBUM



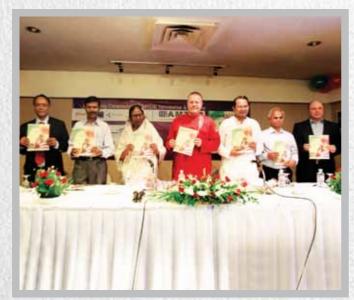








AMTOB ALBUM











AMTOB MEMBERS' PROFILE

GENERAL MEMBERS



Airtel Bangladesh Limited

Airtel Bangladesh Limited is one of the fastest growing mobile services providers in Bangladesh and is a concern of Bharti Airtel Limited, a leading global telecommunications services provider. The company offers a wide array of innovative mobile services, including voice, value added services, data and m-commerce products and is focused on expanding its state-of-the-art mobile network both for coverage and capacity.

Airtel Bangladesh Ltd. is a joint venture between Indian Bharti Airtel Limited and UAE-based Abu Dhabi Group.

Airtel has an active subscribers' base of 8,269 million till end of December 2013.



Banglalink Digital Communications Limited

Banglalink Digital Communications Limited is fully owned by Telecom ventures Itd. of Malta, which is a fully owned subsidiary of Global Telecom Holding S.A.E. Since Banglalink's launch in February 2005, its impact was felt immediately: overnight mobile telephony became an affordable option for customers across a wide range of market segments.

Number of active Banglalink subscribers stood at 28.838 million at the end of December 2013.



Pacific Bangladesh Telecom Limited

Pacific Bangladesh Telecom Limited (PBTL) which operates under the brand name "Citycell" is the first company in Bangladesh to launch mobile phone network on AMPS technology in 1989. It is the lone CDMA mobile operator in the country, providing innovative, reliable and excellent telecommunication and mobile internet services/solutions. PBTL is a joint venture between Singapore's SingTel, Pacific Motors Ltd and by Far East Telecom Ltd.

Citycell has an active subscribers base of over 1.36 million as of December 2013.



Grameenphone Limited

Grameenphone started its journey with the Village Phone program: a pioneering initiative to empower total women of Bangladesh. The name Grameenphone translates to "Rural phone".

Starting its operations on March 26, 1997, the Independence Day of Bangladesh, Grameenphone has come a long way. Grameenphone pioneered the then breakthrough initiative of mobile to mobile telephony and became the first and only operator to cover 98% of the country's people with network.

Grameenphone is a joint venture enterprise between Norwegian Telenor, Grameen Telecom Corporation and 10% shares belong to general retail and institutional investors.

Grameenphone has active subscribers' base of 47.11 million till end of December 2013.

Robi Axiata Limited



Robi, one of the rapidly-growing telecommunications operators in Bangladesh, is developing its services to meet increasing customer needs-ranging from voice and high speed Internet services to tailor-made telecommunications solutions.

Robi is a joint venture company between Axiata Group Berhad of Malaysia and NTT DoCoMo Inc. of Japan. It commenced operation in 1997 as Telekom Malaysia International (Bangladesh) with the brand name 'Aktel'. In 2010 the company was rebranded to 'Robi' and the company changed its name to Robi Axiata Limited.

Robi has an active subscribers' base of 25.38 million till end of December 2013.

Teletalk Bangladesh Limited

Teletalk Bangladesh Limited is a public limited company, registered under the Registrar of the Joint Stock Companies of Bangladesh. Total number of shares is owned by the Government of the People's Republic of Bangladesh.

Teletalk was the first company to launch 3G network with a trial license from the government in 2013.

Teletalk has an active subscribers' base of 2.82 million as of December 2013.

ASSOCIATE MEMBERS



Ericsson Bangladesh Limited

Ericsson Bangladesh Limited, a fully owned company of Telefonaktiebolaget L. M. Ericsson which is a Swedish multinational provider of communications technology and services. Founded in 1876 by Lars Magnus Ericsson, the company is headquartered in Stockholm, Sweden.

Ericsson offers a full range of services, software and infrastructure within Information and Communications Technology (ICT) for telecom operators and other industries.



Huawei Technologies Bangladesh Limited

Huawei Technologies Bangladesh Limited is a fully owned subsidiary of China's Huawei Technologies Co. Ltd. Huawei is a Chinese multinational networking and telecommunications equipment and services company headquartered in Shenzhen, Guangdong.

Huawei was founded in 1987 by ex-military officer Ren Zhengfei and formed as a private company owned by its employees.



ZTE Corporation Bangladesh Ltd.

ZTE Corporation Bangladesh Ltd. is a fully owned company of ZTE Corporation headquartered in Shenzhen, China.

It is a Chinese multinational manufacturer of telecommunications equipment and systems. ZTE's core products are wireless, exchange, access, with the evolution of mobile industry; ZTE has also grown significantly in its handset business.

AMTOB MEMBERS' ACTIVITIES





Rajnish Kaul, Chief Operating Officer of Airtel Bangladesh, distributes handsets among Savar tragedy affected people of last year at an event. A total of 61 Savar tragedy affected people were provided with handsets, connections, recharge loads and Airtel branded shop kiosks. From left to right: Jayesh Patel, Chief Supply Chain Management Officer, A M M Golam Towhid, Head of Sales, Rajnish Kaul, Chief Operating Officer, Noor Muhammad, Chief Human Resource Officer, Sakib Sikder, Head of Legal, Ashraful Haq Chowdhury, Chief Corporate Affairs Officer on the limited ware present during the avent along with the Savar tragedy affacted poople. Limited were present during the event along with the Savar tragedy affected people





Banglalink announces Shakib Al Hasan, one of the best cricket all-rounders in the world as their new brand ambassador





Citycell, Bank Asia, and BancNet signed a tripartite agreement to facilitate mobile banking and mobile wallet services to the clients of the Bank and users of Citycell mobile service. Mr. Mehboob Chowdhury, CEO of Citycell, Mr. Md. Mehmood Husain, President & Managing Director of Bank Asia, and Mr. Md Rafel Kabir, Managing Director of Bangladesh Bancnet Ltd signed the agreement on behalf of respective sides at a function held at Corporate Office of the Bank at Purana Paltan, Dhaka





Grameenphone donated 40 free Vehicle Tracking (VTS) devices to monitor the Ambulance fleet of Anjuman Mufidul Islam. Anjuman will also get free monthly service for one year. An agreement regarding this was signed recently by Vivek Sood, CEO of Grameenphone and Md. Shamsul Haque Chishty, President of Anjuman Mufidul Islam on behalf of their respective organizations. Anjuman attends around 500 ambulance calls free of cost daily through its ambulance fleet





Robi Axiata Limited, in partnership with the Bangladesh Army, created a new world record of the largest human national flag. 27,117 people collectively created the largest flag at the National Parade Ground, Sher-e-Bangla nagar on the 16th December 2013

Photo copyright- Shahisul Alam/Drik/Robi





Agreement signing ceremony between Teletalk Bangladesh Ltd. and Dhaka Power Distribution Limited (DPDC) for online recruitment system and fee collection. Teletalk provides all the technical support for this online recruitment system

