

Report on banglalion wimax ltd.

[Sociology](#), [Communication](#)



Prospects of Wimax Industry Development in Savar Area (Banglalion) [pic]
September 20, 2011 To, Lecturer, Golam Mohammad Forkan Faculty of
Business Administration, Eastern University Subject: Submission of Report on
“ Prospects of Wimax Industry Development in Savar Area” Sir, With
duerespect, we want to state that, we are the students of Eastern University,
of B. B. A. program. We are supposed to do a report on “ Prospects of Wimax
Industry Development in Savar Area”

In this report we have discussed about the prospects and possibilities of
Wimax industry and Banglalion. Here we mainly discussed customer
acceptability of these two. Our Marketing Research courseteachergives us an
overall idea about how to write the report, which help us a lot to conclude
this report. Without his gracious contributions we may not be able to
complete this report successfully. Sincerely yours, _____ Md, Fazle
Rabbi Jico ID#082200068 On Behalf of my group members.

Prospects of Wimax Industry Development in Savar Area (Banglalion)
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September, 2011 Table of content | Particulars | Page No. | Letter of
transmittal | 2 | | Executive Summary | 5-6 | | Introduction | 7-18 | |
Background | 19-21 | | Objective of the report | 22 | | Methodology | 22 | |
Scope and Limitation of the report | 22 | | Company Overview | 23-25 | |
Results And Discussions | 26-29 | | Findings | 30 | | Recommendation and
Conclusion | 31 | Reference | | Appendix | 32-43 | | Bibliography | |
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Executive Summary Success of business depends on several factors and wise decisions; so far Banglalion wimax a wireless internet connectivity provider has been conducting its business quite successfully having great response in Bangladesh. As a company it has got enough fund and sponsors to invest more to capture market share of internet user.

According to demand it has given its response towards it gradually and knowing the demand doing continuous research and promotion. Internet service providers association Bangladesh, Sirius broadband, Access telecom ltd, Bangladesh online ltd, Bijoy ISP in Bangladesh, Agni system ltd, Dhakacom ltd, Nexsus, Isn, are broadband service providers. Broadband connection provides mainly post paid service and due to weather hazard it get disconnected and during rainy season its quality go down for all the subscribers, and as its not portable. Emergence of modem got very high acceptance and Banglalion wimax filled the space very smartly being sincere about its investment, very high demand is existing in some small city and other regions all over the country.

This research will verify how worthy would be the investment of network expansion in Savar. A company should never take decision in ambiguity, Savar, one of the important upazila contains potential market though it could be said by assumption, because first company should know are they ready to accept the service. Earlier some areas have showed potential market but didn't give positive response because of competitors, local broadband providers was in a strong position. Before investing it should be found that how the competitors are operating, is the market ready to switch? if they,

then how long will it take? do education and demographic information seem positive or not, occupation and computer users number and all other information and their willingness to accept the service is subject to verify. Savar seem to be a potential field as its demography and environment is positive. Some information's about Savar - The main occupations are Agriculture 24.34%, agricultural labourer 12.84%, wage labourer 4.44%, cattle breeding, forestry and fishing 1.90%, industry 1.37%, commerce 17.35%, service 20.68%, construction 1.66%, transport 3.96% and others 11.46%. There are many other important institutions in Savar. The 9th Division Army Cantonment is located here. There is a Military Firm and Govt Dairy Firm beside Jahangirnagar University.

BPATC training center (Public Administration Training Centre), the only training centre for the public service commissioned officers in Bangladesh, is situated in Savar. Radio Bangladesh (Bangladesh Betar) employers Residence and The Transmission Zone with huge Transmission Setup. (HPT-1; high power transmission, HPT-2 etc.). Two Largest entertainment theme parks of Bangladesh namely " Fantasy Kingdom" and " Nondon Park" are also located here. Fantasy is situated in Jamgora Bazar and Nondon Park is situated in Jirani. BKSP, Bangladesh Krira Shiksha Pratisthan, the only national sports institute of Bangladesh is also situated in Jirani Bazar, Savar. Dhaka Export processing Zone, DEPZ is also situated in this upazila.

There are 2 universities, 5 colleges, 5 school and colleges, 38 high schools, 3 junior high schools, 16 madrasas, 88 government primary schools, 13 non-government primary schools, 12 community schools, 8 satellite schools, and

1 sports institution. Some of the noteworthy institutions are Adhar Chandra High School (established in 1913), Jahangirnagar University (along with its School and College), Gana Bishwabiddalay, Bangladesh Public Administration Training Centre, Bangladesh Krira Shikha Institution, Atomic Energy Research Establishment, Satellite Ground Receiving Station (Talibabad), National Institute of Biotechnology, Bangladesh Livestock Research Institute, Savar Youth Training Centre, Brac Training Centre.

All the macro environmental factors satisfy that there is a positive environment in savar and these institutions and industries can give thousands of users, now it is needed to find out that demand among possible market is high or low, their willingness to purchase and brandloyaltyof them, how much they are influenced by promotional activities of Banglalion so far, competitors position by conducting research thus the research is must to get to know that. The study proved that Banglalion and wimax industry has potentials in Savar and network expansion should be taken into account to grab the large market. Introduction WiMAX refers to interoperable implementations of the IEEE 802. 16familyof wireless-networks standards ratified by the WiMAX Forum. Similarly, Wi-Fi, refers to interoperable implementations of the IEEE 802. 11 Wireless LAN standards certified by the Wi-Fi Alliance.

WiMAX Forum certification allows vendors to sell fixed or mobile products as WiMAX certified, thus ensuring a level of interoperability with other certified products, as long as they fit the same profile. The original IEEE 802. 16 standard (now called " Fixed WiMAX") was published in 2001. WiMAX

adopted some of its technology from WiBro, a service marketed in Korea. [4] Mobile WiMAX (originally based on 802. 16e-2005) is the revision that was deployed in many countries, and basis of future revisions such as 802. 16m-2011. WiMAX is sometimes referred to as " Wi-Fi on steroids"[5] and can be used for a number of applications including broadband connections, cellular backhaul, hotspots, etc. It is similar to Wi-Fi but it can also permit usage at much greater distances. [6] Uses

The bandwidth and range of WiMAX make it suitable for the following potential applications:

- Providing portable mobile broadband connectivity across cities and countries through a variety of devices.
- Providing a wireless alternative to cable and digital subscriber line (DSL) for " last mile" broadband access.
- Providing data, telecommunications (VoIP) and IPTV services (triple play).
- Providing a source of Internet connectivity as part of a business continuity plan.

Internet access WiMAX can provide at-home or mobile Internet access across whole cities or countries. In many cases this has resulted in competition in markets which typically only had access through an existing incumbent DSL (or similar) operator.

Additionally, given the relatively low costs associated with the deployment of a WiMAX network (in comparison with 3G, HSDPA, xDSL, HFC or FTTx), it is now economically viable to provide last-mile broadband Internet access in remote locations. Backhaul Mobile WiMAX was a replacement candidate for cellular phone technologies such as GSM and CDMA, or can be used as an overlay to increase capacity. Fixed WiMAX is also considered as a wireless backhaul technology for 2G, 3G, and 4G networks in both developed and

developing nations. [7][8] In North America, backhaul for urban operations is typically provided via one or more copper wire line connections, whereas remote cellular operations are sometimes backhauled via satellite.

In other regions, urban and rural backhaul is usually provided by microwave links. (The exception to this is where the network is operated by an incumbent with ready access to the copper network.) WiMAX has more substantial backhaul bandwidth requirements than legacy cellular applications. Consequently the use of wireless microwave backhaul is on the rise in North America and existing microwave backhaul links in all regions are being upgraded. [9] Capacities of between 34 Mbit/s and 1 Gbit/s [10] are routinely being deployed with latencies in the order of 1 M. S. In many cases, operators are aggregating sites using wireless technology and then presenting traffic on to fiber networks where convenient. Triple-play

WiMAX supports the technologies that make triple-play service offerings possible (such as Quality of Service and Multicasting). On May 7, 2008 in the United States, Sprint Nextel, Google, Intel, Comcast, Bright House, and Time Warner announced a pooling of an average of 120 MHz of spectrum and merged with Clear wire to market the service. The new company hopes to benefit from combined services offerings and network resources as a springboard past its competitors. The cable companies will provide media services to other partners while gaining access to the wireless network as a Mobile virtual network operator to provide triple-play services. Some analysts questioned how the deal will work out: Although fixed-mobile onvergence has been a recognized factor in the industry, prior attempts to

form partnerships among wireless and cable companies have generally failed to lead to significant benefits to the participants. Other analysts point out that as wireless progresses to higher bandwidth; it inevitably competes more directly with cable and DSL, inspiring competitors into collaboration. Also, as wireless broadband networks grow denser and usage habits shift, the need for increased backhaul and media service will accelerate, therefore the opportunity to leverage cable assets is expected to increase. Deployment • WiMAX access was used to assist with communications in Aceh, Indonesia, after the tsunami in December 2004.

All communication infrastructures in the area, other than amateur radio, was destroyed, making the survivors unable to communicate with people outside the disaster area and vice versa. WiMAX provided broadband access that helped regenerate communication to and from Aceh. • WiMAX hardware was donated by Intel Corporation to assist the Federal Communications Commission (FCC) and FEMA in their communications efforts in the areas affected by Hurricane Katrina. [11] In practice, volunteers used mainly self-healing mesh, Voice over Internet Protocol (VoIP), and a satellite uplink combined with Wi-Fi on the local link. Connecting [pic] A WiMAX USB modem for mobile internet

Devices that provide connectivity to a WiMAX network are known as the "subscriber unit" (SU). Portable units include handsets (similar to cellular smart phones); PC peripherals (PC Cards or USB dongles); and embedded devices in laptops, which are now available for Wi-Fi services. In addition, there is much emphasis by operators on consumer electronics devices such

as Gaming consoles, MP3 players and similar devices. WiMAX is more similar to Wi-Fi than to other 3G cellular technologies. The WiMAX Forum website provides a list of certified devices. However, this is not a complete list of devices available as certified modules are embedded into laptops, MIDs (Mobile Internet devices), and other private labeled devices. Gateways

WiMAX gateway devices are available as both indoor and outdoor versions from several manufacturers. Many of the WiMAX gateways that are offered by manufactures such as Alvarion, Airp, ZyXEL, Huawei, Motorola, and Green Packet are stand-alone self-install indoor units. Such devices typically sit near the customer's window with the best signal, and provide:

- An integrated Wi-Fi access point to provide the WiMAX Internet connectivity to multiple devices throughout the home or business.
- Ethernet ports to connect directly to a computer or DVR instead.
- One or two analog telephone jacks to connect a land-line phone and take advantage of VoIP.

Indoor gateways are convenient, but radio losses mean that the subscriber may need to be significantly closer to the WiMAX base station than with professionally-installed external units. Outdoor units are roughly the size of a laptop PC, and their installation is comparable to the installation of a residential satellite dish. A higher-gain directional outdoor unit will generally result in greatly increased range and throughput but with the obvious loss of practical mobility of the unit. External modems [pic] External USB modem by Yota marketing in Russia, 2010 USB can provide connectivity to a WiMAX network through what is called a dongle. Generally these devices are connected to a notebook or net book computer.

Dongles typically have omni directional antennae which are of lower-gain compared to other devices; as such these devices are best used in areas of good coverage. Mobile phones HTC announced the first WiMAX enabled mobile phone, the Max 4G, on November 12, 2008. The device was only available to certain markets in Russia on the Yota network. HTC and Sprint Nextel released the second WiMAX enabled mobile phone, the EVO 4G, March 23, 2010 at the CTIA conference in Las Vegas. The device, made available on June 4, 2010, is capable of both EV-DO(3G) and WiMAX(4G) as well as simultaneous data & voice sessions. A number of WiMAX Mobiles are expected to hit the US market in 2011. Technical information | It has been suggested that this article or section be merged into IEEE 802.16. (Discuss Proposed since August 2011. | The IEEE 802.16 Standard WiMAX is based upon IEEE Std 802.16e-2005, approved in December 2005. It is a supplement to the IEEE STD 802.16-2004 and so the actual standard is 802.16-2004 as amended by 802.16e-2005. Thus, these specifications need to be considered together. IEEE 802.16e-2005 improves upon IEEE 802.16-2004 by:

- Adding support for mobility (soft and hard handover between base stations). This is seen as one of the most important aspects of 802.16e-2005, and is the very basis of Mobile WiMAX. Scaling of the Fast Fourier transform (FFT) to the channel bandwidth in order to keep the carrier spacing constant across different channel bandwidths (typically 1.25 MHz, 5 MHz, 10 MHz or 20 MHz). Constant carrier spacing results in higher spectrum efficiency in wide channels, and a cost reduction in narrow channels. Also known as Scalable OFDMA (SOFDMA). Other bands not multiples of 1.25 MHz are defined in the standard, but because the allowed

FFT subcarrier numbers are only 128, 512, 1024 and 2048, other frequency bands will not have exactly the same carrier spacing, which might not be optimal for implementations. Carrier spacing is 10.94 kHz.

- Advanced antenna diversity schemes, and hybrid automatic repeat-request (HARQ)
- Adaptive Antenna Systems (AAS) and MIMO technology
- Denser sub-channelization, thereby improving indoor penetration
- Introducing Turbo Coding and Low-Density Parity Check (LDPC)
- Introducing downlink sub-channelization, allowing administrators to trade coverage for capacity or vice versa
- Adding an extra QoS class for VoIP applications.

SOFDMA (used in 802.16e-2005) and OFDM256 (802.16d) are not compatible thus equipment will have to be replaced if an operator is to move to the later standard (e.g., Fixed WiMAX to Mobile WiMAX).

Physical layer The original version of the standard on which WiMAX is based (IEEE 802.16) specified a physical layer operating in the 10 to 66 GHz range. 802.16a, updated in 2004 to 802.16-2004, added specifications for the 2 to 11 GHz range. 802.16-2004 was updated by 802.16e-2005 in 2005 and uses scalable orthogonal frequency-division multiple access (SOFDMA) as opposed to the fixed orthogonal frequency-division multiplexing (OFDM) version with 256 sub-carriers (of which 200 are used) in 802.16d. More advanced versions, including 802.16e, also bring multiple antenna support through MIMO (See WiMAX MIMO). This brings potential benefits in terms of coverage, self installation, power consumption, frequency re-use and bandwidth efficiency. WiMax is the most energy-efficient pre-4G technique among LTE and HSPA+.

MEDIA ACCESS CONTROL, MAC (data link) layer The WiMAX MAC uses a scheduling algorithm for which the subscriber station needs to compete only once for

initial entry into the network. After network entry is allowed, the subscriber station is allocated an access slot by the base station.

The time slot can enlarge and contract, but remains assigned to the subscriber station, which means that other subscribers cannot use it. In addition to being stable under overload and over-subscription, the scheduling algorithm can also be more bandwidth efficient. The scheduling algorithm also allows the base station to control Quality of service (Quos) parameters by balancing the time-slot assignments among the application needs of the subscriber station. Deployment As a standard intended to satisfy needs of next-generation data networks (4G), WiMAX is distinguished by its dynamic burst algorithm modulation adaptive to the physical environment the RF signal travels through. Modulation is chosen to be more spectrally efficient (more bits per OFDM/SOFDMA symbol).

That is, when the bursts have a high signal strength and a high carrier to noise plus interference ratio (CINR), they can be more easily decoded using digital signal processing (DSP). In contrast, operating in less favorable environments for RF communication, the system automatically steps down to a more robust mode (burst profile) which means fewer bits per OFDM/SOFDMA symbol; with the advantage that power per bit is higher and therefore simpler accurate signal processing can be performed. Burst profiles are used inverse (algorithmically dynamic) to low signal attenuation; meaning throughput between clients and the base station is determined largely by distance.

Maximum distance is achieved by the use of the most robust burst setting; that is, the profile with the largest MAC frame allocation trade-off requiring more symbols (a larger portion of the MAC frame) to be allocated in transmitting a given amount of data than if the client were closer to the base station. The client's MAC frame and their individual burst profiles are defined as well as the specific time allocation. However, even if this is done automatically then the practical deployment should avoid high interference and multipath environments. The reason for which is obviously that too much interference causes the network to function poorly and can also misrepresent the capability of the network.

The system is complex to deploy as it is necessary to track not only the signal strength and CINR (as in systems like GSM) but also how the available frequencies will be dynamically assigned (resulting in dynamic changes to the available bandwidth.) This could lead to cluttered frequencies with slow response times or lost frames. As a result the system has to be initially designed in consensus with the base station product team to accurately project frequency use, interference, and general product functionality. The Asia-Pacific region has surpassed the North American region in terms of 4G broadband wireless subscribers. There were around 1.7 million pre-WiMAX and WiMAX customers in Asia - 29% of the overall market - compared to 1.4 million in the USA and Canada. [19] Spectrum allocation

There is no uniform global licensed spectrum for WiMAX, however the WiMAX Forum has published three licensed spectrum profiles: 2.3 GHz, 2.5 GHz and 3.5 GHz, in an effort to drive standardization and decrease cost. In the

USA, the biggest segment available is around 2.5 GHz,[21] and is already assigned, primarily to Sprint Nextel and Clear wire. Elsewhere in the world, the most-likely bands used will be the Forum approved ones, with 2.3 GHz probably being most important in Asia. Some countries in Asia like India and Indonesia will use a mix of 2.5 GHz, 3.3 GHz and other frequencies.

Pakistan's Wateen Telecom uses 3.5 GHz. Analog TV bands (700 MHz) may become available for WiMAX usage, but await the complete roll out of digital TV, and there will be other uses suggested for that spectrum. In the USA the FCC auction for this spectrum began in January 2008 and, as a result, the biggest share of the spectrum went to Verizon Wireless and the next biggest to AT. [22] Both of these companies have stated their intention of supporting LTE, a technology which competes directly with WiMAX. EU commissioner Viviane Reding has suggested re-allocation of 500–800 MHz spectrum for wireless communication, including WiMAX. [23] WiMAX profiles define channel size, TDD/FDD and other necessary attributes in order to have inter-operating products. The current fixed profiles are defined for both TDD and FDD profiles.

At this point, all of the mobile profiles are TDD only. The fixed profiles have channel sizes of 3.5 MHz, 5 MHz, 7 MHz and 10 MHz. The mobile profiles are 5 MHz, 8.75 MHz and 10 MHz. (Note: the 802.16 standard allows a far wider variety of channels, but only the above subsets are supported as WiMAX profiles.) Since October 2007, the Radio communication Sector of the International Telecommunication Union (ITU-R) has decided to include WiMAX technology in the IMT-2000 set of standards. This enables spectrum

owners (specifically in the 2.5-2.69 GHz band at this stage) to use WiMAX equipment in any country that recognizes the IMT-2000. Spectral efficiency

One of the significant advantages of advanced wireless systems such as WiMAX is spectral efficiency. For example, 802.16-2004 (fixed) has a spectral efficiency of 3.7 (bit/s)/Hertz, and other 3.5-4G wireless systems offer spectral efficiencies that are similar to within a few tenths of a percent. The notable advantage of WiMAX comes from combining OFDMA with smart antenna technologies. This multiplies the effective spectral efficiency through multiple reuse and smart network deployment topologies. The direct use of frequency domain organization simplifies designs using MIMO-AAS compared to CDMA/WCDMA methods, resulting in more effective systems.

Inherent Limitations WiMAX cannot deliver 70 Mbit/s over 50 kilometers (31 miles). Like all wireless technologies, WiMAX can operate at higher bitrates or over longer distances but not both. Operating at the maximum range of 50 km (31 miles) increases bit error rate and thus results in a much lower bitrate. Conversely, reducing the range (to under 1 km) allows a device to operate at higher bitrates. A city-wide deployment of WiMAX in Perth, Australia demonstrated that customers at the cell-edge with an indoor Customer-premises equipment(CPE) typically obtain speeds of around 1-4 Mbit/s, with users closer to the cell tower obtaining speeds of up to 30 Mbit/s.

Like all wireless systems, available bandwidth is shared between users in a given radio sector, so performance could deteriorate in the case of many active users in a single sector. However, with adequate capacity planning

and the use of WiMAX's Quality of Service, a minimum guaranteed throughput for each subscriber can be put in place. In practice, most users will have a range of 4-8 Mbit/s services and additional radio cards will be added to the base station to increase the number of users that may be served as required. Silicon implementations [pic] Picture of a WiMAX MIMO board A number of specialized companies produced baseband ICs and integrated RFICs for WiMAX Subscriber Stations in the 2.3, 2.5 and 3.1 GHz band (refer to 'Spectrum allocation' above). These companies include but not limited to Beceem, Sequans and PicoChip. Intel Corporation is a leader in promoting WiMAX, but has limited its WiMAX chipset development and instead chosen to invest in these specialized companies producing silicon compatible with the various WiMAX deployments throughout the globe.

Comparison Comparisons and confusion between WiMAX and Wi-Fi are frequent because both are related to wireless connectivity and Internet access.

- WiMAX is a long range system, covering many kilometres, that uses licensed or unlicensed spectrum to deliver connection to a network, in most cases the Internet. Wi-Fi uses unlicensed spectrum to provide access to a local network.
- Wi-Fi is more popular in end user devices.
- Wi-Fi runs on the Media Access Control's CSMA/CA protocol, which is connectionless and contention based, whereas WiMAX runs a connection-oriented MAC.
- WiMAX and Wi-Fi have quite different quality of service (Quos) mechanisms:
 - o WiMAX uses a Quos mechanism based on connections between the base station and the user device. Each connection is based on specific scheduling algorithms.
 - o Wi-Fi uses contention access - all subscriber stations that wish

to pass data through a wireless access point (AP) are competing for the AP's attention on a random interrupt basis.

This can cause subscriber stations distant from the AP to be repeatedly interrupted by closer stations, greatly reducing their throughput. • Both 802.11 (which includes Wi-Fi) and 802.16 (which includes WiMAX) define Peer-to-Peer (P2P) and ad hoc networks, where an end user communicates to users or servers on another Local Area Network (LAN) using its access point or base station. However, 802.11 supports also direct ad hoc or peer to peer networking between end user devices without an access point while 802.16 end user devices must be in range of the base station. Although Wi-Fi and WiMAX are designed for different situations, they are complementary.

WiMAX network operators typically provide a WiMAX Subscriber Unit which connects to the metropolitan WiMAX network and provides Wi-Fi within the home or business for local devices (e. g. , Laptops, Wi-Fi Handsets, smart phones) for connectivity. This enables the user to place the WiMAX Subscriber Unit in the best reception area (such as a window), and still be able to use the WiMAX network from any place within their residence.

Background Seven major division is under coverage of Banglalion ut not fully, Savar has been believed as one of the major region . now information and possibilities of svar are subject to look at here before taking any major decision by Banglalion.

Savar has 13 Unions/Wards, 350 Mauzas/Mahallas, and 321 villages. The municipal area (Savar Town) consists of 9 wards and 55 mahallas. The area of the town is 24.1 km². It has a population of 124885; male 53.03%,

female 46. 97%; population density per km² of 5182. Savar thana was established in 1912 and was turned into an upazila in 1983. Agriculture and manufacturing are the two major economic sectors in Savar. The main crops grown here are Paddy, Jute, peanut, onion, garlic, chilli and other vegetables. The extinct or nearly extinct crops in the region are Aus paddy, Asha Kumari paddy, sesame, linseed, kali mator, randhuni saj, mitha saj, kaun and mas kalai.

The main fruits cultivated here are Jackfruit, mango, olive, papaya, guava, kamranga, berry and banana. There are 181 combined fisheries, dairies and poultries Dairy, 5 hatcheries, 209 poultries, and 1319 fisheries.

Manufacturing facilities include Ceramic industry, beverage industry, press and publication, garments industry, foot ware, jute mills, textile mills, printing and dyeing factory, transformer industry, automobile industry, biscuit and bread factory, pharmaceutical industry, soap factory, brick field, cold storage, welding, plant nursery, etc. Bangladesh Export Processing Zone is located in this upazila. The Cottage industry includes 8 Weaving, 100 goldsmith and 29 others workshops.

The main exports are Jackfruit, papaya, flower, sapling, dairy products, meat, transformer, fabrics, dye, medicine, readymade garments, electronics and electric goods, shoe, brick, sweetmeat etc. There are 62 km of pucca, 56 km of semi pucca, 562 km of mud road; and 50 km of highway. Transports used here include the traditional (and extinct or nearly extinct) Palanquin, bullock cart and horse carriage as well as modern day vehicles. There are 14 regular Hats and bazars here. Noted bazars are Savar, Nabinagar, Amin Bazar,

Balibhadra and Bagbari Bazar. Noted hats include Ashulia, Savar, Shimulia, Kathgara, Sadullapur, Nayar hat (with adjoined bazar), and Vhakurar Hat. Prominent fairs include Darogali Bayati Mela (Nayarhat), Bahattar Prahar mela (Savar), Ghora Pirer Mela (Nalam), Muharram Mela (Katlapur) and Pawsh Mela (Dhamsona).

Several Hindu families played a critical role in the development of the township during the British Raj in the 19th and first half of the 20th century. After partition of India in 1947, the Hindu influence in the area waned following the departure of many prominent Hindu families. The 1960s saw the establishment of some important institutions, including a dairy farm and a University in the area. Concurrently, communist politics was on the rise in the area. However, this was replaced with Bengali nationalist zeal, when the Awami League won the 1970 election in this constituency. In 1975, Savar came to the spotlight when the Maoist leader Shiraj Shikdar was secretly tortured and executed at Savar cantonment.

Savar was politically important to the military dictators of the mid-1970s and '80s, as the cantonment armory here was the closest one outside the capital. From the 1990s to mid-2000s, the Bangladesh Nationalist Party candidate has been routinely elected to parliament from this constituency. However, Awami League and other parties; Communist Party of Bangladesh, Bangladesher Samajtantrik Dal, Worker's Party(Menon), National Awami Party, Sammobady Dal (including several Islamist ones) continue to have grassroots presence. The general election at the end of 2008 saw an Awami League candidate elected to parliament from this constituency.

Jahangirnagar University and a few colleges in the area serve as a hotbed of active student politics and strife.

Foreign dignitaries customarily visit Savar as a part of their trip to Bangladesh to pay respect to the martyrs of 1971 a Savar is the home of Jahangirnagar University, a Public University of Bangladesh and only University for full student residence facilities which is famous for its scenic beauty and as a prime destination for the Siberian migratory birds during winter. There are many other important institutions in Savar. The 9th Division Army Cantonment is located here. There is a Military Firm and Govt Dairy Firm Beside Jahangirnagar University. BPATC training center (Public Administration Training Centre), the only training centre for the public service commissioned officers in Bangladesh, is situated in Savar. Radio Bangladesh (Bangladesh Betar) employers Residence and The Transmission Zone with huge Transmission Setup. HPT-1; high power transmission, HPT-2 etc.). Two Largest entertainment theme parks of Bangladesh namely " Fantasy Kingdom" and " Nondon Park" are also located here. Fantasy Kingdom is situated in Jamgora Bazar and Nondon Park is situated in Jirani. BKSP, Bangladesh Krira Shiksha Pratisthan, the only national sports institute of Bangladesh is also situated in Jirani Bazar, Savar. Dhaka Export processing Zone, DEPZ is also situated in this upazila. There are 318 Mosques, 8 churches and 68 other religious institutions, most noted of which are Jahangirnagar University and Savar Dairy Farm Mosques, Savar Baptist Church, Savar Daskinpara Harir Akhra Temple and Panchabati Ashram Temple.

There are 2 universities, 5 colleges, 5 school and colleges, 38 high schools, 3 junior high schools, 16 madrasas, 88 government primary schools, 13 non-government primary schools, 12 community schools, 8 satellite schools, and 1 sports institution. Some of the noteworthy institutions are Adhar Chandra High School (established in 1913), Jahangirnagar University (along with its School and College), Gana Bishwabiddalay, Bangladesh Public Administration Training Centre, Bangladesh Krira Shikha Institution, Atomic Energy Research Establishment, Satellite Ground Receiving Station (Talibabad), National Institute of Biotechnology, Bangladesh Livestock Research Institute, Savar Youth Training Centre, Brac Training Centre. The locally published newspapers and periodicals are Jagrata Kantha, Savar Barta, Saf Katha, Savar Kantha and Ganabhasa.

The officially registered cultural and social organizations here include 81 Co-operative societies, 1 children's organization, 3 film societies, 5 cinema halls, 5 theatre groups, 1 theatre stage, 3 music centre, 5 orphanages, 1 opera party (an indigenous travelling theater troop), 3 women's club, 1 chapter of Bangladesh Mohila Parishad, 2 Amnesty organizations, 1 golf club, 2 entertainment parks. There are numerous other unofficial organizations as well. The operationally important NGOs are brac, asa, proshika, grameen bank, Ganasastha Kendra, World Vision, Swanirvor Bangladesh, VERC, Palli Mangal Karmasuchi, CDD, Adesh, Mother Vision Society of Bangladesh (AID FOR EYE DISABLE) etc. The health centers in Savar include 1 Upazila health complex, a combined military hospital (Savar Cantonment), the Korea Bangladesh Friendship Hospital, 7 family planning centers, 2 satellite clinics, and 21 private clinics.

Objectives Broad objective • To find out the prospects of wimax industry and Banglalion in Savar. Specific objective • To know about product related prospects of Wimax and Banglalion • To know about price related prospects of Wimax and Banglalion • To know about Distribution related prospects of Wimax and Banglalion • To know about promotion related prospects of Wimax and Banglalion Scope and limitations We could have conduct vast survey if we had enough members and other supports. If we could have a representative of Banglalion communication would be easier with sample as they could have all their answers Limitations we faced are Time constraint • Insufficient Lab facilities • Restrictions when entering several offices • Lack of cooperativeness by the authority Methodology The data is collected from primary and secondary source. To find out the primary data we have done a survey in savar and also made an informal interview with some local people. We also had to use the Secondary source for company profile. We visited their website and some other websites for relevant information. And to analyze we used SPSS 12 for statistical analysis. Company overview Banglalion Communications Ltd is a private limited company incorporated in Bangladesh on 5 Nov 2008 under the Companies Act, 1994.

The company obtained license from Bangladesh Telecommunication Regulatory Commission (BTRC) to operate Broadband Wireless Access (BWA) services nationwide using WiMAX technology in 18 November 2008. Augere Wireless Broadband Bangladesh Ltd yesterday launched the much-awaited wireless broadband service through WiMax in some designated areas in Dhaka. Augere, one of the two WiMax licensees, is the first company in Bangladesh to launch such service under the brand name 'Banglalion'.

Augere is initially offering two packages. Customer will have to pay Tk 3, 400 a month for the Banglalion 512 kbps package. The monthly charge for the Qubee 1 Mb has been fixed at Tk 6, 200, while the modem price for both the packages is Tk 7, 000.

Initially, the service was available for businesses and residential customers in Gulshan, Banani, Baridhara, Mirpur and Uttara. Service will be available across Bangladesh soon. WiMax is a technology that provides wireless transmission of data using a variety of transmission modes from point-to-multipoint links to portable and fully mobile internet access. The technology supports peak download rates of up to 46 Mbps and peak uplink rates of up to 14 Mbps. Jerry Mobbs, chief executive officer of Augere Bangladesh, Russell T Ahmed, chief marketing officer, were present at the launching ceremony. Augere also unveiled a Flagship Store at Gulshan to provide 24-hour customer services.

Three bidders -- BanglaLion Communication, BRAC BD Mail Network Ltd and Augere Wireless Broadband Bangladesh Ltd -- won the WiMax licences through an auction organised by the Bangladesh Telecommunication Regulatory Commission (BTRC) in September last year. However, BRAC later refused to take the licence. UK-based Augere Holdings owns 60 percent of Augere Wireless Broadband Bangladesh Ltd along with two local companies. Teleport Bangladesh owns 30 percent and Aamra Resources Ltd owns the remaining 10 percent. Banglalion provides broadband internet services to residential and commercial users in Bangladesh using WiMAX technology. We understand, that consumer and businesses in Bangladesh need and want

faster, accessible, and affordable broadband internet service and we are working hard to ensure that.

We are a new company with Integrity, Dynamism, Commitment and Innovation who continuously developing our infrastructure starting in Dhaka and some major cities, thus bringing the whole country under coverage.

Banglalion currently covers 8 divisional cities Dhaka, Narayanganj, Chittagong, Sylhet, Rajshahi, Khulna, Rangpur & Barisal with hopes of covering all the major areas of Dhaka city by the end of 2010, entire Dhaka city by second quarter of 2011, and the entire country by the second quarter of 2013. Banglalion has already made a presence in Chittagong by covering some major areas in the city with about 14 BTS. Meantime, network rollout in other major cities such as: Munshiganj, Gazipur, Mymensingh, Comilla, Noakhali, Laxmipur, Satkhira, Bogra, and Cox's Bazar are about to begin.

These cities and peripheries are expected to be under the coverage of BanglaLion by the end of 2nd quarter 2012; BanglaLion plans to bring most of the areas of the country under its seamless coverage. As part of the coverage plan, BanglaLion has already installed & commissioned 35 BTSs. With these 35 BTSs, BanglaLion plans to cover the key areas of Dhaka by end of December 2009. By the 1st quarter of 2010, BanglaLion plans to bring the whole Dhaka city and it's wider periphery under coverage by installing 300 BTSs. Meantime, network rollout in other major cities such as; Chittagong, Sylhet, Khulna, Rajshahi, Barisal are about to begin. These cities and peripheries are xpected to be under the coverage of BanglaLion coverage by the 3rd quarter of 2010 and by the end of 2nd quarter 2011,

BanglaLion plans to bring most of the areas of the country under its seamless coverage Right now you can find our partial coverage in the following locations in Dhaka City: Motijheel , Chankherpul, Nakhal Para, Banani, Uttara, Mohakhali, Shyamoli, Mouchak, Central Road , Dhanmondi, Gulshan Lalmatia Mohammadpur Badda TikatoliMugda Para/Bashab, Nikunja, Kochukhet, Baridhara (DOHS), Rampura/Banasree

Result and Discussion

Product related discussion

Statistics | | Wimax Industry | | . 031 | 4 | Reliability test means how reliable the responses are but here value of alpha should have been around . or more but still it is positive and after deleting two negative value we found that the responses are not that reliable but we can be positive about the responses.

Price related statistics

Statistics Prepaid Charges Postpaid Charges Charges of B. p worth the Availability
broadband providers charges N Valid 100 100 100 100 Median 4. 00 4. 00 2. 00 2. 00 5. 0 Mode 5 5 2 2 5

The table indicate that prepaid charges are reasonable and as well as postpaid charges, but charges of broadband providers could not satisfy the subscribers as thir response mostly said they disagree and on avegare they are disagree and median is again disagree.

Price related Reliability statistics | Cronbach's Alpha | N of Items | | . 276 | 4 | Here after removing one negative value we can be positive that the answers are reliable although value of alpha is below standard.

Distribution related Statistics | Availability | Bill payment | Customer care | | N | Valid | 100 | 100 | 100 | | | Missing | 4 | 4 | 4 | | Mean | 4. 48 | 4. 21 | 3. 70 | | Median | 5. 00 | 4. 00 | 4. 00 | | Mode | 5 | 4 | 3 |

Maximum people agreed that they want scratch card of prepaid Banglalion available in mobile and telecommunications shop and they strongly agreed

mostly and on average they are agreed or strongly agreed They want to pay bills from local telecommunication shops as rear response was between the ranges of agree and strongly agree.

Along with online customer care service people want customer care centre, but many stayed neutral in this regard perhaps they want the service to get experienced first then they will may think about customer care. Reliability statistics | Cronbach's Alpha | N of Items | |. 147 | 3 | Again we can be positive about the respondents as we got a positive value of cronbachs alpha and it would have been better if it would show . 5 or above but still we will be positive. Promotion related statistics | | word of mouth | |. 111 | 4 | Promotion related responses are positive again and though . 5 or above value is still missing but we can be positive about the responses. Findings People of Savar will gladly welcome wimax industry as they have lots of institutes and business and education is rich in number according to census board. • Local broadband providers could not provide good enough service as they do not take prompt action when they get any complaints and that do not give connection during weather hazard and even in case of heavy rainfall • Surprises motivate customers but broadband providers do not provide that and the business is based on dealership so there is no formal strategy is followed • Promotion of banglalion made good impact on them they heard through word of mouth and they and they are pleased with media exposure that indicates no promotional strategy will be needed to follow specially for savar. Social network and online income is the craze among the youth and Banglalion targeted that while promotion their product. • Banglalion gives surprises and free usage and that is not provided by broadband providers

and free usage is demanded by the customers that means no other treatment would be needed. • Banglalion distributes scratch cards in local telecommunication shops to make it available again people of Savar want these this way • As all the information's showed positive responses and all the strategy followed by Banglalion matched there are lots of possibilities in Savar • Demographic information shows positive result too • Failure of broadband providers is creating a chance to grab a huge market. Conclusion and Recommendation

Banglalion has all they need to expand their service and the people of savar and its infrastructure development are favorable too. Banglalion should not change its promotional and distributional strategies as they would need time and fund for that but they should design plans for savar. Savar is such an area where tower for network coverage for wimax service has not been established yet. So Banglalion should be the pioneer in Savar before competitors fill the gap. Banglalion's marketing strategy has worked well in Savar as they know the brand as a well-known one. Its word of mouth has reached to a large market so it should continue with its service consistently.

Price has been important factor for choosing a brand over competitor as Banglalion provides many packages customer can fine tune their choices and price should not be increased and it should continue its strategy of giving free usage Distribution system and strategy has got positive response and local telecommunication shops have been proved as useful tool. Customer did not emphasize on customer care centre so that indicate establishment of network could be started first. Later on customer care may be established.

Appendix Statistics | | Wimax Industry | Preferences | Staying Home | Online
Income | | Valid | Agree | 47 | 45. 2 | 47. 0 | 47. 0 | | | Strongly agree | 53 |
51. 0 | 53. 0 | 100. | | | Total | 100 | 96. 2 | 100. 0 | | | Missing | System | 4 | 3.
8 | | | Total | 104 | 100. 0 | | | Preferences | | Frequency | Percent | Valid
Percent | Cumulative Percent | | Valid | Neutral | 17 | 16. 3 | 17. 0 | 17. 0 | | |
Agree | 40 | 38. 5 | 40. 0 | 57. | | | Strongly agree | 43 | 41. 3 | 43. 0 | 100. 0 |
| | Total | 100 | 96. 2 | 100. 0 | | | Missing | System | 4 | 3. 8 | | | Total | 104 |
100. 0 | | | Online Income | | Frequency | Percent | Valid Percent | Cumulative
Percent | | Valid | Disagree | 12 | 11. 5 | 12. | 12. 0 | | | Neutral | 20 | 19. 2 |
20. 0 | 32. 0 | | | Agree | 34 | 32. 7 | 34. 0 | 66. 0 | | | Strongly agree | 34 | 32.
7 | 34. 0 | 100. 0 | | | Total | 100 | 96. 2 | 100. 0 | | | Missing | System | 4 | 3. 8
| | | Total | 104 | 100. | | | Social Network | | Frequency | Percent | Valid
Percent | Cumulative Percent | | Valid | Neutral | 14 | 13. 5 | 14. 0 | 14. 0 | | |
Agree | 46 | 44. 2 | 46. 0 | 60. 0 | | | Strongly agree | 40 | 38. 5 | 40. 0 | 100. 0
| | | Total | 100 | 96. 2 | 100. 0 | | | Missing | System | 4 | 3. | | | Total | 104 |
100. 0 | | | Download | | Frequency | Percent | Valid Percent | Cumulative
Percent | | Valid | Neutral | 1 | 1. 0 | 1. 0 | 1. 0 | | | Agree | 49 | 47. 1 | 49. 0 |
50. 0 | | | Strongly agree | 50 | 48. 1 | 50. 0 | 100. 0 | | | Total | 100 | 96. 2 |
100. | | | Missing | System | 4 | 3. 8 | | | Total | 104 | 100. 0 | | | Statistics | |
Prepaid Charges| Postpaid Charges| Charges of | B. p worth the | Availability |
| | | broadband providers| charges | | N | Valid | 100 | 100 | 100 | 100 | |
Median | 4. 00 | 4. 00 | 2. 00 | 2. 00 | 5. 0 | | Mode | 5 | 5 | 2 | 2 | 5 | Prepaid
Charges | | Frequency | Percent | Valid Percent | Cumulative Percent | | Valid
| Disagree | 8 | 7. 7 | 8. 0 | 8. 0 | | | Neutral | 20 | 19. 2 | 20. 0 | 28. 0 | | |
Agree | 29 | 27. 9 | 29. 0 | 57. 0 | | | Strongly agree | 43 | 41. 3 | 43. | 100. 0 |

|| Total | 100 | 96.2 | 100.0 || | Missing | System | 4 | 3.8 | | | Total | 104 |
 100.0 || | Postpaid Charges | | Frequency | Percent | Valid Percent |
 Cumulative Percent | | Valid | Disagree | 9 | 8.7 | 9.0 | 9.0 | | | Neutral | 22 |
 21. | 22.0 | 31.0 | | | Agree | 33 | 31.7 | 33.0 | 64.0 | | | Strongly agree | 36
 | 34.6 | 36.0 | 100.0 | | | Total | 100 | 96.2 | 100.0 | | | Missing | System | 4
 | 3.8 | | | Total | 104 | 100.0 | | | Charges of broadband providers |
 Frequency | Percent | Valid Percent | Cumulative Percent | | Valid | Strongly
 disagree | 24 | 23.1 | 24.0 | 24.0 | | | Disagree | 42 | 40.4 | 42.0 | 66.0 | | |
 Neutral | 21 | 20.2 | 21.0 | 87.0 | | | Agree | 6 | 5.8 | 6.0 | 93.0 | | |
 Strongly agree | 7 | 6.7 | 7.0 | 100.0 | | | Total | 100 | 96.2 | 100.0 | | |
 Missing | System | 4 | 3.8 | | | Total | 104 | 100.0 | | | BP worth the charges
 | | Frequency | Percent | Valid Percent | Cumulative Percent | | Valid |
 Strongly disagree | 26 | 25.0 | 26.0 | 26.0 | | | Disagree | 48 | 46.2 | 48.0 |
 74.0 | | | Neutral | 16 | 15. | 16.0 | 90.0 | | | Agree | 5 | 4.8 | 5.0 | 95.0 | | |
 Strongly agree | 5 | 4.8 | 5.0 | 100.0 | | | Total | 100 | 96.2 | 100.0 | | |
 Missing | System | 4 | 3.8 | | | Total | 104 | 100.0 | | | Availability |
 Frequency | Percent | Valid Percent | Cumulative Percent | | Valid | Disagree |
 1 | 1.0 | 1.0 | 1.0 | | | Neutral | 4 | 3.8 | 4.0 | 5.0 | | | Agree | 41 | 39.4 |
 41.0 | 46.0 | | | Strongly agree | 54 | 51.9 | 54.0 | 100.0 | | | Total | 100 |
 96.2 | 100.0 | | | Missing | System | 4 | 3. | | | Total | 104 | 100.0 | | |
 Statistics | | Availability | Bill payment | Customer care | | N | Valid | 100 | 100
 | 100 | | | Missing | 4 | 4 | 4 | | Mean | 4.48 | 4.21 | 3.70 | | Median | 5.00 |
 4.00 | 4.0 | | | Mode | 5 | 4 | 3 | Bill payment | | Frequency | Percent | Valid
 Percent | Cumulative Percent | | Valid | Strongly disagree | 1 | 1.0 | 1.0 | 1.0
 | | | Disagree | 5 | 4.8 | 5.0 | 6.0 | | | Neutral | 8 | 7.7 | 8.0 | 14.0 | | | Agree

| 44 | 42.3 | 44.0 | 58. | | | Strongly agree | 42 | 40.4 | 42.0 | 100.0 | | |
Total | 100 | 96.2 | 100.0 | | | Missing | System | 4 | 3.8 | | | | Total | 104 |
100.0 | | | Customer care | | Frequency | Percent | Valid Percent | Cumulative
Percent | | Valid | Disagree | 11 | 10.6 | 11.0 | 11. | | | Neutral | 37 | 35.6 |
37.0 | 48.0 | | | Agree | 23 | 22.1 | 23.0 | 71.0 | | | Strongly agree | 29 | 27.
9 | 29.0 | 100.0 | | | Total | 100 | 96.2 | 100.0 | | | Missing | System | 4 | 3.8
| | | | Total | 104 | 100.0 | | | Statistics | word of mouth | Media Exposure |
Free usage | Weather Hazard | | Valid | Agree | 42 | 40.4 | 42.0 | 42.0 | | |
Strongly agree | 58 | 55.8 | 58.0 | 100.0 | | | Total | 100 | 96.2 | 100.0 | | |
Missing | System | 4 | 3.8 | | | | Total | 104 | 100.0 | | | Media Exposure |
Frequency | Percent | Valid Percent | Cumulative Percent | | Valid | Strongly
disagree | 1 | 1.0 | 1.0 | 1.0 | | | Disagree | 8 | 7.7 | 8.0 | 9.0 | | | Neutral |
12 | 11.5 | 12.0 | 21.0 | | | Agree | 34 | 32.7 | 34.0 | 55.0 | | | Strongly
agree | 45 | 43.3 | 45.0 | 100.0 | | | Total | 100 | 96.2 | 100. | | | Missing |
System | 4 | 3.8 | | | | Total | 104 | 100.0 | | | Free usage | | Frequency |
Percent | Valid Percent | Cumulative Percent | | Valid | Strongly disagree | 1 |
1.0 | 1.0 | 1.0 | | | Disagree | 5 | 4.8 | 5.0 | 6.0 | | | Neutral | 7 | 6. | 7.0 |
13.0 | | | Agree | 35 | 33.7 | 35.0 | 48.0 | | | Strongly agree | 52 | 50.0 | 52.
0 | 100.0 | | | Total | 100 | 96.2 | 100.0 | | | Missing | System | 4 | 3.8 | | | |
Total | 104 | 100.0 | | | Weather Hazard | Frequency | Percent | Valid Percent
| Cumulative Percent | | Valid | Strongly disagree | 40 | 38.5 | 40.0 | 40.0 | | |
| Disagree | 48 | 46.2 | 48.0 | 88.0 | | | Neutral | 10 | 9.6 | 10.0 | 98.0 | | |
Agree | 1 | 1.0 | 1.0 | 99.0 | | | Strongly agree | 1 | 1.0 | 1.0 | 100.0 | | |
Total | 100 | 96.2 | 100. | | | Missing | System | 4 | 3.8 | | | | Total | 104 | 100.
0 | | | Surprises by BP | | Frequency | Percent | Valid Percent | Cumulative

Percent | | Valid | Strongly disagree | 48 | 46. 2 | 48. 0 | 48. 0 | | | Disagree |
 52 | 50. 0 | 52. 0 | 100. 0 | | | Total | 100 | 96. 2 | 100. | | | Missing | System |
 4 | 3. 8 | | | | Total | 104 | 100. 0 | | | Action taken by BP | | Frequency |
 Percent | Valid Percent | Cumulative Percent | | Valid | Strongly disagree | 37
 | 35. 6 | 37. 0 | 37. 0 | | | Disagree | 49 | 47. 1 | 49. 0 | 86. 0 | | | Neutral | 9 |
 8. | 9. 0 | 95. 0 | | | Agree | 4 | 3. 8 | 4. 0 | 99. 0 | | | Strongly agree | 1 | 1. 0 |
 1. 0 | 100. 0 | | | Total | 100 | 96. 2 | 100. 0 | | | Missing | System | 4 | 3. 8 | | |
 | Total | 104 | 100. 0 | | | Reliability Statistics Cronbach's Alpha | N of Items | |
 |-. 038 | 6 | | a. The value is negative due t