

Overview of Mobile Activity Management



By

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ID: 2000-01-10-030

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ABSTRACT

This report based on Post-Paid, Automated Pre-paid service of Pacific Bangladesh Telecom Limited (City cell). It provides an operational efficiency within and among the departments of the organization. After taking all necessary data it is clear that they are using a paper work based on manual system, which is very time consuming. Need a large number of human resources. Have a lot of errors and complicated to manage. So they are facing lots of problems with this system. And also they are very much interested about the new approach of developing the database software. Now they are use totally computerize data input and create note-pad file also report generating system. The software will take input from the agents of their daily activities. It stored all the customer personal information and generate the not pad file base on their daily requested given from the customer care and sales department. The management will get the reports about the employee performance, about the problem of the customers.

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Contents at a Glance

	Page
Introducing the Company	1
Organizational Structures	7
Business Strategies and Marketing Mix of CityCell	10
Technology: AMPS and CDMA	18
Distribution Channel	27
SWOT Analysis	33
Assessing CityCell's Current State and Future Direction	36
Products and Service offered by Pacific Bangladesh Telecom Limited	39
Conclusion	52
Bibliography	

1. Introducing the Company:

1.1 The Company:

Pacific Bangladesh Telecom Limited (PBTL) is the first mobile phone service provider in the Indian subcontinent and started their business in 1993. The address of the Head office is: "Pacific Centre" 14, Mohakhali C/A Dhaka 1212. PBTL was founded by Pacific Group Limited and Hutchison Whampoa Limited. **CityCell** is the brand name under which Pacific Bangladesh Telecom provides wireless telecom or mobile phone service and products to the general and other customers.

Pacific Bangladesh Telecom Ltd., PBTL in short, is one of the companies of Pacific Group. The Pacific group indulges in diversified businesses including:

- Pacific Group of Companies (since 1967)
- Fisheries
- Banking
- Automobiles
- Tea
- Pharmaceuticals etc
- Pacific Bangladesh Telecom Limited (since 1993), and first mobile service provider in the sub-continent as well only operator in Bangladesh supporting two mobile technologies – AMPS, CDMA and provides Cellular and Fixed wireless services.

1.2 Pacific Group Ltd:

The Pacific Group is a group of companies under common ownership. The group has interests in automobile service (Pacific Motors Ltd.), consumer electronics (Pacific Industries Ltd.), fisheries (Bengal Fisheries Ltd.), tea (Noyapara Tea Company Ltd.) and telecommunications (Pacific Bangladesh Telecom Ltd.). This group of industries was founded by

renowned industrialist and current honorable foreign minister – Mr. M. Morshed Khan.

1.3 Hutchison Whampoa Ltd:

Hutchison Whampoa Limited (HWL) is a Hong Kong-based diversified, multinational company with its origins dating back to the 1800s. As part of the Li Ka-Shing group of companies, HWL's ultimate shareholder is Cheung Kong (Holdings) Limited, which has a 49.9 % interest in the Company. In terms of market capitalization, HWL is one of the largest companies listed on the Hong Kong stock exchange. With over 150,000 employees worldwide, the Group operates five core businesses in 41 countries.

1.4 The Company History:

In October 1990, Hutchison Bangladesh Telecom Limited (HBTL) was formed as a joint venture between Bangladesh Telecom Limited (BTL) and Hutchison Whampoa Limited of Hong Kong. In March of that year BTL had been issued a license by Bangladesh Telegraph and Telephone Board (BTTB) for operating cellular, paging and other wireless communication networks. The joint venture agreement with Hutchison gave HBTL the right to use BTL's cellular license while Hutchison would provide financial support to BTL.

However, soon there was legal dispute between BTTB and BTL regarding the refusal of BTTB to provide Public Switch Telecommunication Network (PSTN) channels, which ensured connectivity to the BTTB network. The Supreme Court then ruled in April 1993 that BTTB would have to provide PSTN connections to HBTL, and that BTL would have to transfer the cellular portion to the license of HBTL. BTTB gave HBTL the PSTN connections in August 1993 and HBTL began commercial operation of the first cellular telephone service in Bangladesh in the same month. The

owners of HBTL decided to sell their stakes in the company due to the legal war. HBTL's shares were divided into two parts: Type A, which was held by BTL and Type B, held by Hutchison. Each type of share represented 50% title of HBTL. Pacific Motors Limited bought the type A shares while Hong Kong based financial investors Far East Telecom Limited bought the Type B shares.

On 12th February 1996, HBTL was renamed Pacific Bangladesh Telecom Limited. PBTL uses the brand name **CityCell** to market its cellular products. In order to boost the financial and also the managerial strength of PBTL, the shareholders of PBTL has completed the transaction under the agreements in which Fujitsu Limited, Japan and Asian Infrastructure Development Company (AIDEC), established in Cayman Islands, would acquire 10% and 20% equity shares in PBTL, respectively on June 2000.

With this acquisition of 10% shares in PBTL by Fujitsu Limited, a Global Fortune 500 company, they have further strengthened their presence in Bangladesh and also have demonstrated confidence as well as their commitment to the Bangladesh market. Fujitsu has long been supplying Microwave links and telecommunications equipment to BTTB and is clearly a leading market player in providing telecommunication solutions in Bangladesh. Being 10% equity shareholder of the company Fujitsu is in a position to nominate 1 (one) Director to the Board of PBTL.

1.5 History in Brief:

- ☐ In 1993 August 8, first launched mobile phone service with BTTB Connectivity using AMPS.
- ☐ In 1997 March 26, first Covered Chittagong.
- ☐ In 1999 March 26, first introduced CDMA technology in the subcontinent.
- ☐ In 2001 January 15, first to set-up a communications backbone to Chittagong

- In 2001 May 15, first to extend coverage to Cox's Bazar
- In 2001 December 27, first to set-up a communications backbone to Sylhet
- In 2002, first introduced Super off peak hours.
- In 2002 July 17, first to launch 'Aalap' prepaid service with BTTB incoming facility
- In 2003, first to launch 'Aalap' prepaid service with BTTB outgoing and NWD and ISD outgoing facility from 8:00 pm to 8:00 am.
- In 2003, first to launch 'Sabar Phone' postpaid package with T&T connectivity.
- In 2004 January 1, first to launch 'Aalap' prepaid service with both ways BTTB connectivity and NWD and ISD outgoing facility for 24 hours.
- In 2004, first to launch 'Amar phone' postpaid mobile-to-mobile package.
- In 2004, first to launch 'Cash Card' facility to pay the bill less than a minute for the postpaid subscribers.
- In 2004, first start to 'know the bill status anytime with **CityCell** Online Self Care' for the postpaid subscribers.

1.6 Mission, Vision, Objectives, Goals, Strategies, & Workforce:

1.6.1 Mission:

PBTL's mission statement is "The most successful cellular, paging and other wireless service provider in Bangladesh by virtue of having greater operating expertise." This mission statement puts into perspective about a few points about **CityCell**. Their inherent emphasis is on quality, not cheapness of service. The first priority is to provide a high-end service that can be used for both commercial and personal use.

1.6.2 Vision:

The Vision of the company is "To continue to be the leader in the Telecom industry in the region and provide a complete communication solution to our customers with a smile." It may be noted that there is an emphasis on strong customer relations. This is important to **CityCell** especially as, until recently, they positioned their packages as high-end packages. This means that they need to promote their packages especially to corporate and business users. Such customers will require strong support for brand loyalty to develop.

1.6.3 Objectives:

The business strategy of City Cell is focused around two objectives:

1.6.3.1 Qualitative Objectives:

- Increasing service offerings.
- Expanding the network.
- Creating innovative, unique, and cost-effective various products to customers.
- Increasing loyalty by focused customer retention program.
- Develop operational procedure for the fast deployment of service.

1.6.3.2 Quantifiable objectives:

- Increase subscriber base over 1 million on the network by Dec 31, 2003 with 99.8% overall network availability.

1.6.4 Goals:

The current strategic goal of the company is to occupy a unique position in Bangladesh in the telecom sector. One way to achieve this is to develop a strong subscriber base to be able to penetrate in the markets with other attractive products.

The ways to ensure a strong subscriber base is to:

- ✓ Meet customer requirements
- ✓ Establish technological leadership through choice of appropriate technology
- ✓ Establish service leadership through quality manpower
- ✓ Expand the footprint of cellular coverage
- ✓ Expand the customer base

1.6.7 Strategies:

1.6.7.1 Functional Level Strategy:

- ✓ PBTL's focus is on efficiency, quality, innovation, and customer responsiveness.

1.6.7.2 Business Level Strategy:

- ✓ PBTL applies both the cost leadership and differentiation strategies as their business level strategies.
- ✓ To increase market share by expanding the network
- ✓ Least call rate than any other mobile companies

1.6.7.3 Corporate Level Strategy:

- ✓ PBTL follows related diversification as their corporate level strategies.

1.6.8 Workforce:

CityCell has currently 445 employees, including drivers and peons under direct payroll of **CityCell**. There is one advisor and 11 Interns and part timers working for them currently. The CCD is the biggest department in **CityCell** at this moment with 112 employees and the HRD is the smallest with currently one VP and three executives only.

2. Organizational Structures:

CityCell has just recently introduced the post of the CEO and established the Human Resource Department (HRD). The name of the new CEO is Mr. Chris Maloy, an Australian with vast international experience in telecom business. The CEO has taken over the activities that the MD used to perform and he happens to be the son of the owner of the Pacific Group of Industries Mr. Faisal Murshed Khan.

The Vice President (VP) of the Human Resource Department (HRD) has joined in the March of this year. The activities of the HRD have been defined. No Assistant Vice President (AVP) has yet been hired for this department.

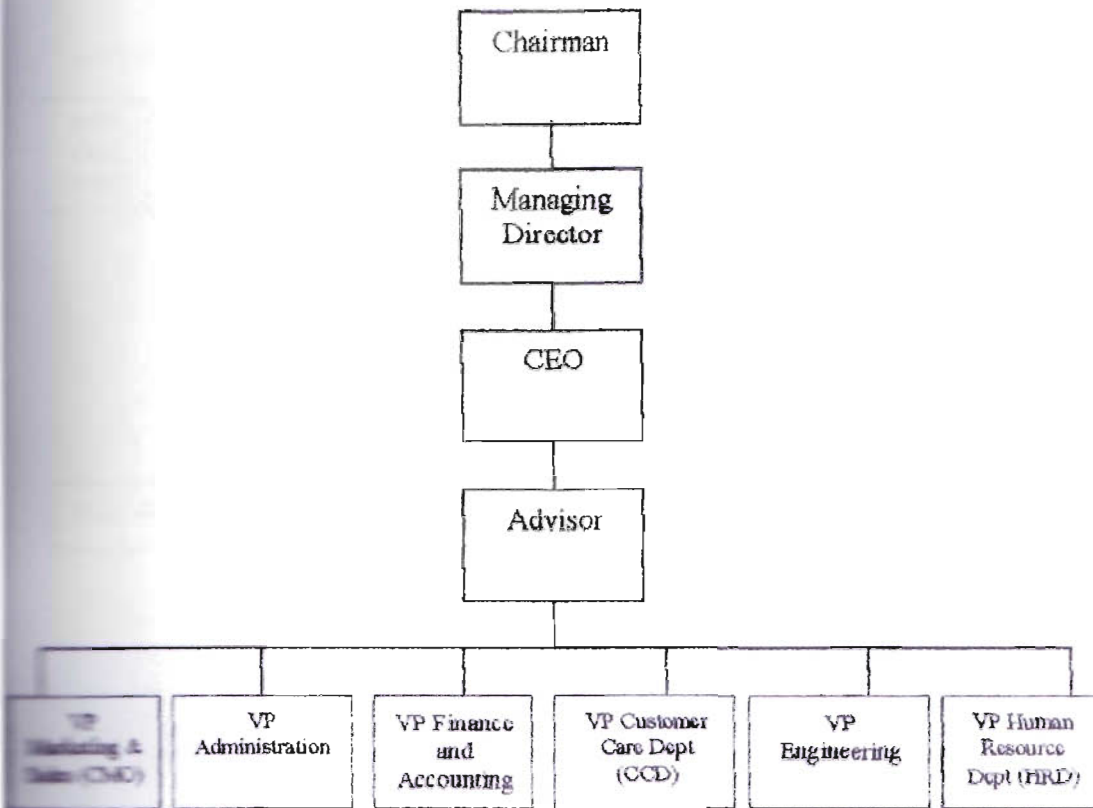
The marketing and sales department makes up the office of the CMO that is the Chief Marketing Officer. And he is the VP of this department. The office of the CMO divides down into four sub departments with an AVP in charge of each.

A senior VP is in the charge of the whole engineering department and there are three VPs are assigned for Switch, Base Transceiver Station and Planning & Development. There are AVPs for each section of the engineering department except Power, which is directly under the charge of Senior VP.

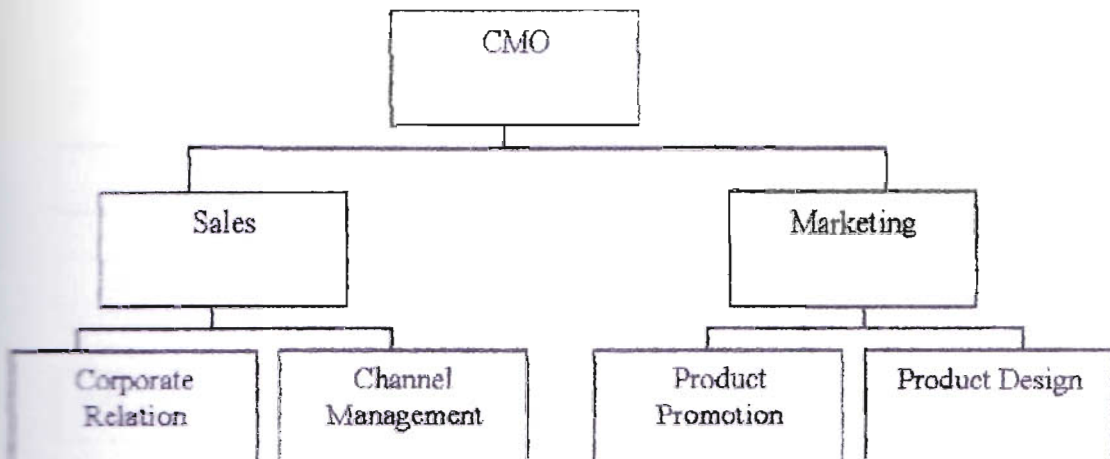
It has to be mentioned that there are two other posts after the AVP and those are of the post senior executives and the executives who have managerial authority. There are also advisors assigned for various departments who are not direct employees and they happen to have directorial level status above the VPs and below the CEO. There are currently two advisors working in the Engineering and Marketing & Sales department. There are other levels of employees too who are under the executives. They are officers and senior officers. There are also the rank

of drivers and peons. The Charts below represents the organogram of the company:

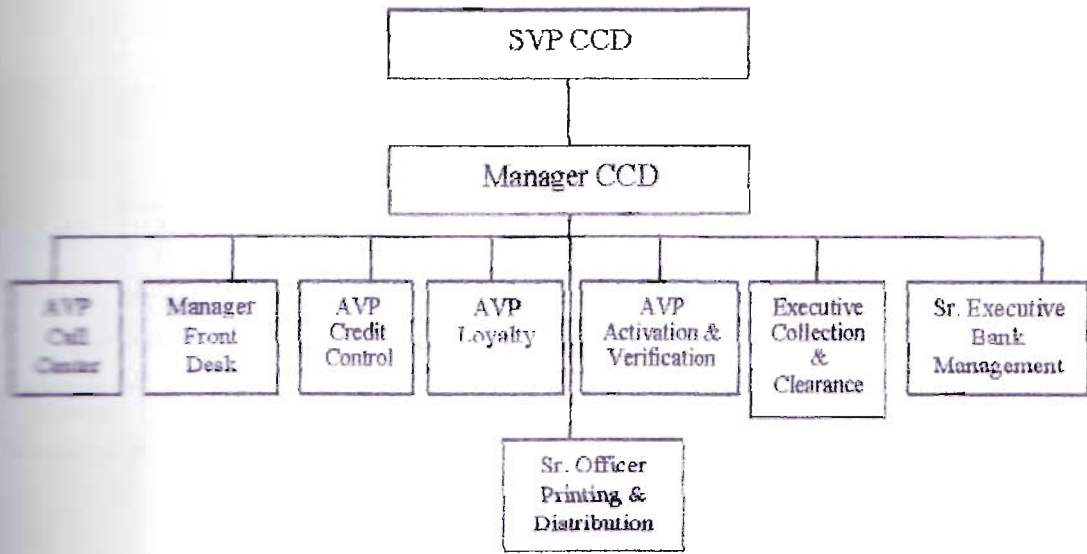
2.1 UPPER ORGANIZATIONAL HIERARCHY



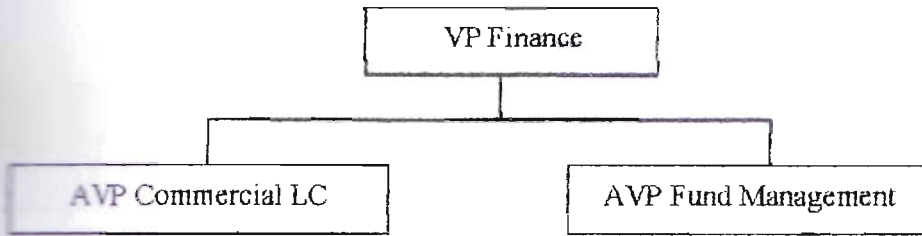
2.2 Marketing Department



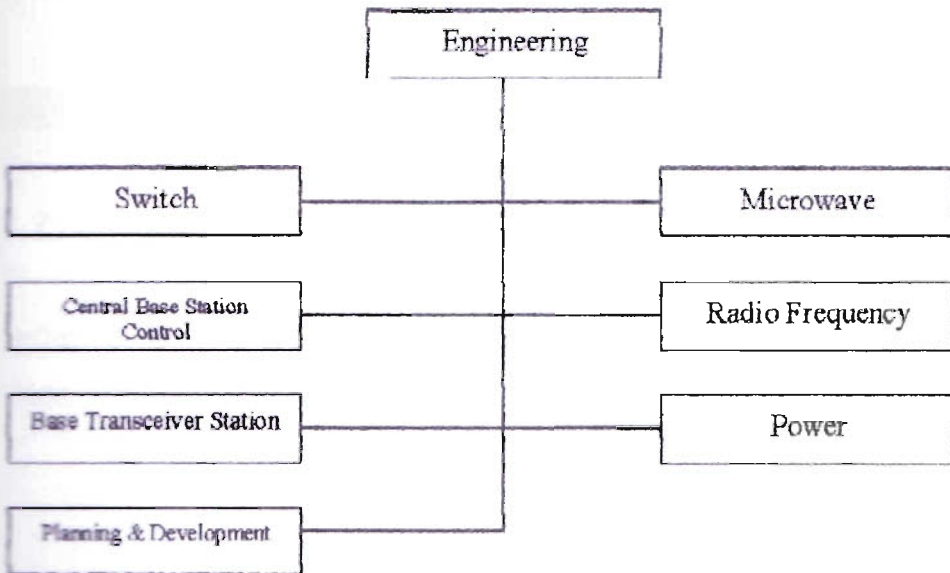
2.3 Customer Care Department



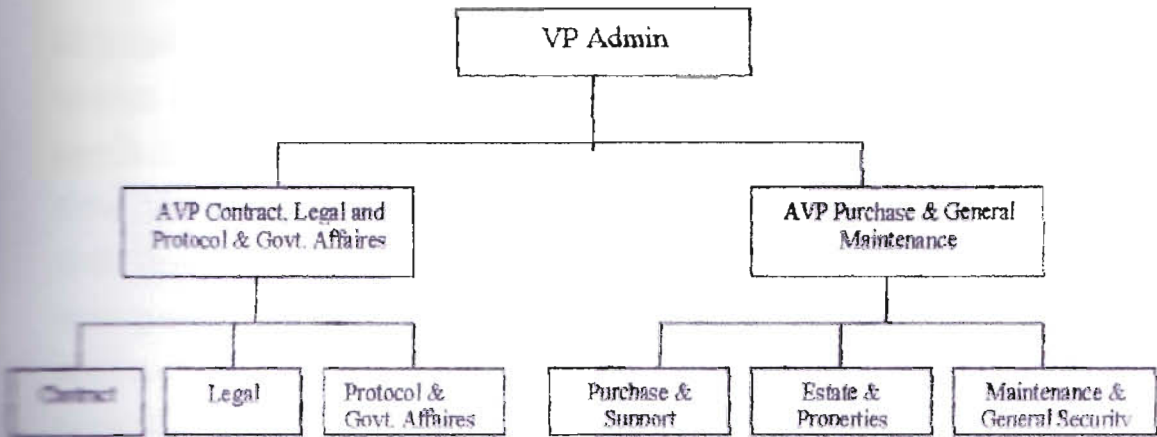
2.4 Finance & Accounts Department



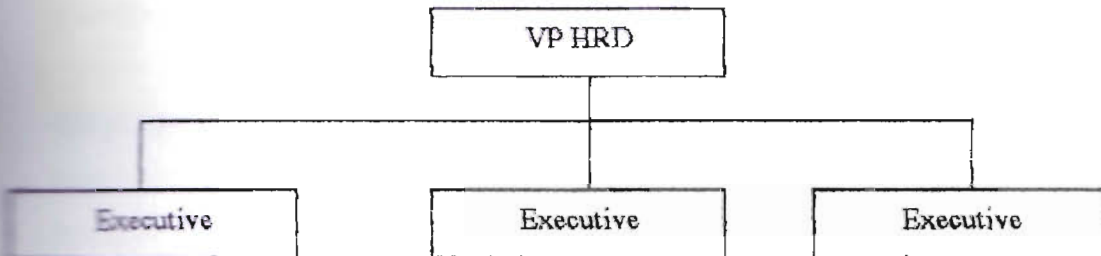
2.5 Engineering Department



2.6 Administration



2.7 Human Resource Department



3. Business Strategies and Marketing Mix of CityCell:

3.1 CityCell's Strategies:

CityCell is a service-oriented company as it provides wireless telecom service. Their primary business according to CityCell is to sell wireless

telecommunication packages to the customers and provide customers with comprehensive wireless telecommunication solutions.

CityCell as it first started out its business in 1993 targeted a niche market of the rich businessmen who would need information on the move or use it as a luxury item. It had a "Blue-Blood" image at that time. It followed the premium pricing policy. It was the right decision at that time and **CityCell** made a lot of revenue by doing so. But with the emergence of Grameen Phone and Aktel, **CityCell** had to change its business policy. It could not survive in the long run with the "Blue-Blood" appeal. It brought down the prices of its mobile packages from what was Tk.150000 in 1993 to 15000 at around the year 2000-01. And today the lowest price of their package on offer costs around Tk.7000. **CityCell** had to establish a mass-market strategy as it now targets every segment of the mobile telephony market. Let us look at the strategies that **CityCell** follows now days:

Functional level strategy:

CityCell's functional level strategy deeply concentrates on being customer responsive. It wants to grow its business by providing superior customer service to the customers. And for that, as already stated, **CityCell** has a 99 member customer service team working for them 24 hours a day, on the Helpline or in the front desk 7 days a week. Not only has that **CityCell** just recently introduced a slogan saying, "Because We Care". The strategy is very much suited to **CityCell** as we know that **CityCell** have strong competitors in the form Grameen Phone and Aktel.

Business level strategy:

The business level strategy of **CityCell** is that of differentiation. As **CityCell** targets everybody from a small businessman of a small town to

the big corporate of the urban area, it has packages to everybody. There are the prepaid mobiles for the cost conscious people and the mobile with monthly rents of Tk.500. It has prepaid mobile-to-mobile packages and 24 hours BTTB connectable prepaid packages. The packages that offered will be classified in depth in the marketing mix part of this section.

Global strategy:

CityCell does not have any Global strategies as it is still in a growth stage within Bangladesh. But for the sense of it, some of the mobiles do have the ISD connection in them.

Corporate level strategy:

The management of PBTCL are already involved in diversified businesses of automobiles, banking, tea gardens etc. But PBTCL itself has no plans of any sort of backward integration, which would be creating technologies like CDMA or forward integration to make mobile sets themselves.

3. 2 Marketing Mix:

CityCell now follows the mass-market strategy. It has long passed the days when it used to be the monopolistic cellular phone company selling its connections with sets at Tk.150000. Now it wants to serve all segments of mobile users from low end users to corporate all over Bangladesh. The Marketing Mix or the 4Ps that **CityCell** follows are discussed below-

I) Product:

CityCell's products are the packages it offers. CityCell offers both postpaid and prepaid packages for consumers.

Postpaid Packages:

The box below shows the postpaid packages that are on offer below and their target market segments. Below and their target market segments.

Packages	Target Market Segments
Amar Phone	Personal use mainly by middle class users
Shabar Phone	Personal use mainly by middle class users
CityCell 500	*Commercial / business / personal use by upper middle class and for rich consumers
**Fixed Cellular Package (FWT)	*Commercial / business use by commercial, institutions and business organizations

*Commercial Users- Commercial users are the people who does telephone business in small shops as well as those business people who do the Voice Over Internet Protocol (VOIP) business. This VOIP allows for making calls at much cheaper rates to foreign countries through the use of Internet. Using the FWT is a better option for these people as they do not have to get involved with TNT.

**FWT(Fixed wireless terminal)- As already mentioned the these phones are like the wireless land phones which can work anywhere where CityCell network is available and can access even mobiles with only mobile to mobile connectivity.

CityCell also have two special postpaid packages on offer. One is called the Press Special Package made for reporters and the Corporate Package targeted towards business organizations, NGO's and Governmental Organizations.

a) **Press Package:** It is a package, which offers discounted call rates and set price. This package is very much desired as I have seen myself all the major newspaper reporters and private channel reporters are subscribed to it. They are charged half as much as the normal regular package subscribers.

b) **Corporate Package:** CityCell regards the lines bought by reputed organizations, private and governmental organizations to be corporate lines in the sense their problems are solved on basis priority and gives them special services. But the corporate package is given to those who at least buys 25 connections at a time and are established organizations. The charges for these corporate subscribers are nearly slashed by half compared to the normal clients. Some of the reputed corporate subscribers are Standard Chartered Bank, HSBC, Beximco etc. some governmental corporate clients of CityCell are DESA, DGFI, Prime Minister Office etc. some NGO's who are the CityCell clients are BRAC, Proshika etc.

Prepaid Packages:

The prepaid packages are made for the cost conscious buyers. It does not matter if the person is a businessman or a student. But the user has control on his cost of mobile usages; because he knows how much money he is spending on making a call. But of course the rate is a bit higher than postpaid mobile call charges. It is currently the most effective tool for CityCell and other companies for growth in respects of gaining customers throughout the whole of Bangladesh. CityCell released its prepaid first in 2002, with the uniqueness of having TNT incoming facility. The pre-paid package of CityCell is called "Aalap". The three packages that CityCell has are discussed below-

Aalap A:

This is the package, which has TNT Incoming and outgoing facilities at off-peak hours. The peak and off-peak hour system will be discussed in the pricing part.

Aalap B:

This package offers only mobile-to-mobile facility.

Aalap 24:

This package offers 24 hours BTTB connectivity with NWD and ISD. It was just released recently following on the footsteps of Aktel's "Ashol Phone".

Older Packages:

CityCell used to offer a lot of packages in the past. They served 29 packages for their consumers. Quite a few of them are still in use like Fixed Cellular Package, Talk 500, Talk 1000. The customers are given the option to switch to new packages, which could be a bit less expensive for them. Most have switched to the newer package with the payments of a small sum of money.

Set Classification:

CityCell classifies its subscribers' sets in two ways depending on from they buy it from. The sets, which are brought from CityCell, are called the "White Sets" and those, which are not brought from CityCell, are called "Grey Sets".

ii) Price:

CityCell's policy when it comes to pricing is to keep the lowest call rate possible per minute for the *zonal calls*. This is visible in their call rate policy compared to that of others. The call rates are discussed in-depth in the later Call Rate Comparison part of this report.

When a customer brings his won set which is called "Grey Sets", he has to present a bank clearance to make sure that he/she paid the tax on the purchased set and they also have to pay an additional charge of Tk.575 (including 15% VAT) for getting the set programmed. This is for an existing number in a "Grey Set". For buying a new connection for a "Grey Set" customers' as well need to show the tax papers and pay an additional charge Tk.1675 either for a new prepaid or postpaid line. The customer has to pay a refundable deposit fixed for the postpaid packages.

For any sort of connection bought the lowest price that **CityCell** has for offer at the moment for a set and a line is Tk.6999 and the highest is of Tk.16,999. Please check the Appendix for details on set offerings and pricing.

The customer always have to pay 15% VAT for his/her bills (both pre-paid and post-paid) according to government regulations. The set price of CityCell includes the 15% VAT.

III) Place:

The main emphasis of **CityCell** when deciding on place is convenience and proximity to customers. Dealers are not treated as the subordinate branches of the company. Instead they are taken as partners in the endeavor to provide better services to customers.

The primary marketing channel used is that of distributors who are at various locations. It is only natural, from a business point of view, that the density of dealers is highest in Dhaka. In other regions of the country, there are dealers in each main town of the various provinces where **CityCell** network exists. Network coverage has been increasing and so are the numbers of dealers.

Logistics and transportation is handled by the dealers primarily. A certain amount of logistic support is provided to dealers for better supporting their activities for **CityCell**.

iv) Promotion:

The company that had once relied on its name to gain new market share now has to aggressively market their brand and packages among the Bangladeshi customers.

The main advertising is done in newspapers. The advertisements have a general look targeted towards everybody. **CityCell** ads in the past used to emphasize on building a solid aristocratic image of the postpaid packages and a 'light and happy' image of the prepaid packages. But at the moment there is no differentiation in the ads because **CityCell** does not have any use of 'aristocracy' any more. It targets the general population. The 'light and happy' image is visible however on the advertisements in television and sometimes on newspapers. Overhead plastic billboard ads of **CityCell** are visible on every major and important roads of Dhaka. The slogan of these ads is the current theme of **CityCell** "More Than You Thought possible"

Personal selling is done not just for phones but also for new data transfer services to corporate customers. This is done by the services marketing department under CSO and also by corporate sales department under Marketing and Sales.

The marketing department carries out public relations. It emphasizes on PBTL's contribution to the development of the telecom industry in Bangladesh and the introduction of advanced CDMA technology. As part of their promotional activity the marketing department gives out banners, poster and calendars to its dealers. They dealers are also given a monthly allowance of around Tk. 2500 for supporting **CityCell**

activities. Notebooks and calendars are given out to corporate clients every year.

For supporting sales activities **CityCell** had offered a free camera with every prepaid package brought. Then recently they offered "lucky" scratch cards for all its packages. Prepaid customers could get a free airtime ranging from Tk. 400 to Tk. 4800. Postpaid customers could get a free rental ranging from a month to an year. Now City Cell is offering 15% discount on purchase of a single **CityCell** package and 50% on two. **CityCell** have carried the most aggressive sales campaign recently than any other companies.

4. Technology: AMPS and CDMA:

4.1 AMPS:

The most commonly used cellular system in North America, the Advanced Mobile Phone System (AMPS) had also gained widespread acceptance in Asia (specifically in Korea, Hong Kong, Japan, Singapore, etc). An analogue system, this was introduced in the mid 80s and used a technique known as Frequency Division Multiple Access (FDMA) to allocate Channels. Thus it divides its entire allocation in sections of 30 KHz and uses each of these sections as channel. Thus AMPS is able to provide 30 channels per 1MHz of frequency allocated. The principal behind AMPS is analogous to dividing up a large hall room (the entire frequency allocated to the operator) into a number of smaller rooms (channel) once the first pair has completed their conversation and left the room (disconnected).

4.2 Code Division Multiple Access (CDMA):

Code Division Multiple Access is a system in which a subscriber uses the entire frequency for the entire period that his phone is active. Installing of segregating users by frequency (FDMA) or time (TDMA) this technology segregates customers by coding the signals in such a manner that each customer decrypts only one signal at any one signal at any given time. Again using the previous example, this would be similar to allowing a large number of people into the hall room, but requiring each pair to converse in a different language. Thus while everyone would hear everyone else, this would just be more of background noise rather than interference. On the other hand, each person would be able to understand this partner, because they would be speaking the same language. One of major differences between CDMA and the other existing technologies is in terms of frequency reuse. Using CDMA an operator would use the entire allocated frequency in every cell. The reuse pattern, therefore, is in effect a 'one cell reuse pattern'. Therefore, the operator can serve many more customers per unit of allocated bandwidth compared to either AMPS or GSM. In general, CDMA capacity is rated to be 10 to 20 times higher than analogue techniques such as AMPS, and 3 to 5 times higher than other digital cellular technologies such as GSM.

4.3 Advantages of CDMA:

There are numerous advantages of using CDMA technology, the most important of which are:

(a) Higher Capacity: Since CDMA makes more efficient use of the available spectrum; it can provide greatly increased capacity. CDMA capacity is rated to be 10 to 20 times higher than other analogue techniques such as AMPS, and 3 to 5 times higher than other digital cellular techniques such as GSM. With higher capacity, CDMA accommodates

higher demands and supports new digital services such as data transmission and mobile fixing.

(b) Simplified Planning: CDMA allows system planning to become much easier through the use of the same frequency in every sector of every cell. Because the entire frequency is used in each cell, operators do not have to retune base stations, thus capacity expansion is quicker and simpler.

(c) Better Voice and Call Quality: The unique encoding scheme used for each different CDMA conversation virtually eliminates cross-talk and dramatically reduces the impact of interference from other sources. Also, the larger bandwidth of CDMA signals (the signals use the entire frequency versus only a portion for competing technologies) means that they are less prone to fading compared to the narrower bandwidths of AMPS and GSM.

(d) Enhanced Security and Privacy: Since the signals are coded, it is very difficult to intercept and decode a CDMA signal. This prevents eavesdropping and prohibits cloning and other types of fraud. Also, due to the wider bandwidth, such phones are difficult to jam.

4.4 How cell phones work:

Cellular telephones have revolutionized the communications arena, redefining how we perceive voice communications. Traditionally, cellular phones remained out of the hands of most consumers due to their high cost. As a result, cell phone carriers have invested time and resources into finding ways to give the systems higher capacity and thus lower cost. Cell systems are benefiting from this research and starting to develop into large-scale consumer products. Today, cellular phones are truly consumer electronics devices with over 580 million subscribers. The Nokia Bowl and Qualcomm Stadium are further evidence of the idea that cell phones are consumer electronics devices. Since cell phones have ceased to be an exclusive status symbol of high-powered lawyers and

are now in the hands of millions of consumers, they are now incredibly cost sensitive. Specifically, it is not the cost of the device that counts, but the cost of using the device. As a result, the cellular phone infrastructure is being optimized to allow calls to be placed as inexpensively and reliably as possible. Today, more than ever, cellular companies are looking for ways to bring down the call cost to attain even higher market penetration, especially in metropolitan areas. It is common knowledge that Cellular Phones are wireless phones; however, many are confused about how a cell phone actually works. Essentially, cell phones use high-frequency radio signals to communicate with "cell towers" located throughout the calling area. Cell phones communicate in the frequency range of 806-890 MHz and 1850-1990 MHz. When the user wants to make a call, the cell phone sends a message to the tower, asking to be connected to a given telephone number. If the tower has sufficient resources to grant the request, a device called a "switch" patches the cell phone's signal throughout to a channel on the "public switched telephone network" (otherwise known as the PSTN). This call now takes up a wireless channel as well as a PSTN channel that will be held open until the call is completed. The figure on the right side illustrates this process. This channel cannot be used for anyone else's call until the cell phone call is discontinued. Given this simple description of how cell phones work, we will add technical details about various facets of cell phone systems throughout the remainder of this section. As the name implies, cell phone systems are made up of many small "cells." Each cell in a cell phone system represents the area served by one cell phone tower. The concept of cells is the key behind the success of cell phones because by spacing many cells fairly close to each other, the cell phones may broadcast at very low power levels (typically 200mw-1W, depending on system). Since the cell phones may broadcast at low power levels, they use small transmitters and small batteries, and thus are able to fit in a shirt pocket, unlike amateur radios, which can occupy a tabletop. Cells are typically spaced around 1-2 miles apart but can be

spaced up to 20 miles apart in rural areas. In loaded areas or areas with many obstacles (such as tall buildings), the cell sites may be spaced closer together. Some technologies, like PCS (Personal communication System), require closer cell spacing due to their higher frequency and lower power operation. Additionally, buildings interfere with cell signals coming from outside, so many buildings have their own "Microcell." The Kingdome and New York subway are two examples of where Microcells are used. Microcells may also be used to increase overall capacity within a heavily populated area such as a city's core downtown area. In fact, homes may have "picocells" connected to the home's PSTN connection to allow the cell phone to be used as a cordless phone. An example of typical microcell and Picocell environments is pictured in the following figure.

With thousands of cellular phone calls going on at any given time within a city, it certainly would not work for everyone to talk on the same channel at once (as in CB and short-wave radios). Therefore, several different techniques were developed by cell phone manufacturers to split up the available bandwidth into many channels each capable of supporting one conversation. The following sections will discuss each technology and how it works.

4.4.1 FDMA:

FDMA stands for "Frequency Division Multiple Access". Though it could be used for digital systems, is exclusively used on all analog cellular systems. Essentially, FDMA splits the allocated spectrum into many channels. In current analog cell systems, each channel is 30 kHz. When a FDMA cell phone establishes a call, it reserves the frequency channel for the entire duration of the call. The voice data is modulated into this channel's frequency band (using frequency modulation) and sent over the airwaves. At the receiver, the information is recovered using a band-pass filter. The phone uses a common digital control channel to acquire

channels. FDMA systems are the least efficient cellular system since each analog channel can only be used by one user at a time. Not only are these channels larger than necessary given modern digital voice compression, but they are also wasted whenever there is silence during the cell phone conversation. Analog signals are also especially susceptible to noise – and there is no way to filter it out. Given the nature of the signal, analog cell phones must use higher power (between 1 and 3 watts) to get acceptable call quality. Given these shortcomings, it is easy to see why FDMA is being replaced by newer digital techniques.

4.4.2 TDMA:

TDMA stands for "Time Division Multiple Access." TDMA builds on FDMA by dividing conversations by frequency and time. Since digital compression allows voice to be sent at well under 10 kilobits per second (equivalent to 10 kHz), TDMA fits three digital conversations into a FDMA channel (which is 30 kHz) By sampling a person's voice for, say 30 milliseconds, then transmitting it in 10 milliseconds; the system is able to offer 3 timeslots per channel in a round-robin fashion. This technique allows compatibility with FDMA while enabling digital services and easily boosting system capacity by three times. While TDMA is a good digital system, it is still somewhat inefficient since it has no flexibility for varying digital data rates (high quality voice, low quality voice, pager traffic) and has no accommodations for silence in a telephone conversation. In other words, once a call is initiated, the channel/timeslot pair belongs to the phone for the duration of the call. TDMA also requires strict signaling and timeslot synchronization. A digital control channel provides synchronization functionality as well as adding voice mail and message notification. Due to the digital signal, TDMA phones need only broadcast at 600 milliwatts.

4.4.3 CDMA:

CDMA stands for "Code Division Multiple Access" and is both the most interesting and the hardest to implement multiplexing method. CDMA has been likened to a party: When everyone talks at once, no one can be understood, however, if everyone speaks a different language, then they can be understood. CDMA systems have no channels, but instead encode each call as a coded sequence across the entire frequency spectrum. Each conversation is modulated, in the digital domain, with a unique code (called a pseudo-noise code) that makes it distinguishable from the other calls in the frequency spectrum. Using a correlation calculation and the code the call was encoded with, the digital audio signal can be extracted from the other signals being broadcast by other phones on the network. From the perspective of one call, upon extracting the signal, everything else appears to be low-level noise. As long as there is sufficient separation between the codes (said to be mutually orthogonal), the noise level will be low enough to recover the digital signal. Each signal is not, in fact, spread across the whole spectrum (12.5 MHz for traditional cellular or 60 MHz in PCS cellular), but is spread across 1.25 MHz "pass-bands." CDMA systems are the latest technology on the market and are already eclipsing TDMA in terms of cost and call quality. Since CDMA offers far greater capacity and variable data rates depending on the audio activity, many more users can be fit into a given frequency spectrum and higher audio quality can be provide. The current CDMA systems boast at least three times the capacity of TDMA and GSM systems. The fact that CDMA shares frequencies with neighboring cell towers allows for easier installation of extra capacity, since extra capacity can be achieved by simply adding extra cell sites and shrinking power levels of nearby sites. CDMA technology also allows lower cell phone power levels (200 milliwatts) since the modulation techniques expect to deal with noise and are well suited to weaker signals. The downside to CDMA is the complexity of

deciphering and extracting the received signals, especially if there are multiple signal paths (reflections) between the phone and the cell tower (called multi path interference). As a result, CDMA phones are twice as expensive as TDMA phones and CDMA cell site equipment is 3-4 times the price of TDMA equivalents.

4.4.4 GSM:

GSM stands for "Global System for Mobile Communications." GSM is mostly a European system and is largely unused in the US. GSM is interesting in that it uses a modified and far more efficient version of TDMA. GSM keeps the idea of timeslots and frequency channels, but corrects several major shortcomings. Since the GSM timeslots are smaller than TDMA, they hold less data but allow for data rates starting at 300 bits per second. Thus, a call can use as many timeslots as necessary up to a limit of 13 kilobits per second. When a call is inactive (silence) or may be compressed more, fewer timeslots are used. To facilitate filling in gaps left by unused timeslots, calls do "frequency hopping" in GSM. This means that calls will jump between channels and timeslots to maximize the system's usage. A control channel is used to communicate the frequency hopping and other information between the cell tower and the phone. To compare with the other systems, it should be noted that GSM requires 1 Watt of output power from the phone.

4.4.5 CDMA VS. GSM: A Technical Comparison

An advantage of CDMA includes:

- Increased cellular communications security.
- Simultaneous conversations, less call drops, strong network.
- Increased efficiency, meaning that the carrier can serve more subscribers.

- Smaller phone sets.
- Low power requirements and little cell-to-cell coordination needed by operators.
- Extended reach - beneficial to rural users situated far from cells.

Disadvantages of CDMA include:

- Due to its proprietary nature, the engineering community for solving does not know all of CDMA's flaws.
- CDMA is relatively new, and the network is not as mature as GSM.
- CDMA cannot offer international roaming, a large GSM advantage.

Advantages of GSM:

- GSM is already used worldwide with over 450 million subscribers.
- International roaming permits subscribers to use one phone throughout Western Europe. CDMA will work in Asia, but not popular European destinations.
- GSM is mature, having started in the mid-80s. This maturity means a more stable network with robust features. CDMA is still building its network.
- GSM's maturity means engineers cut their teeth on the technology, creating an unconscious preference.
- The availability of Subscriber Identity Modules, which are smart cards that provide secure data encryption give GSM m-commerce advantages.

Disadvantages of GSM:

- Lack of access to burgeoning American market.

5. Distribution Channel:

Distribution channel is the bridge between the company and the customers. Distribution channel is very important for any company. If there is any gap in distribution channel the marketer is unable to reach its product and services to the customers in time.

In the beginning, PBTL decided to distribute through their own distribution channel. As the market is growing fast, it is giving dealership to sell the mobile to the direct customers. There are many interested people who want to become distributor of **CityCell**. But **CityCell** has some strict policies that are maintained when the dealership is given.

In recent days PBTL has signed agreement with established distribution channels like Singer Bangladesh, Rangs, Flora who are also acting as **CityCell**'s distributors.

6. Industry Analysis:

Mobile telecommunication industry in Bangladesh is now in growth stage. Since the technology is expensive, there are only four companies operating the mobile service and **CityCell** presently has more than 4,60,000 subscribers. The other three companies are, Grameen Phone, Aktel, Sheba Telecom. BTB also informed the nation about their future plan to launch mobile phone.

6.1 Grameen Phone Limited:

Grameen Phone (GP) is the current market leader in terms of market share, which is owned by a consortium of investors comprising of Grameen Bank (the biggest NGO in Bangladesh), Telenor (Norwegian

state owned telecommunication company) Marubeni Corporation (of Japan) AND Gonophone Development Corporation (of the US). GP is using the GSM technology to provide mobile cellular services to just above 14,20,000 subscribers in Bangladesh. The company started its service in March 1997. So far Grameen has installed more than 200 BTS's around the country for cell to cell coverage. At the initial stage, GP did not charge for incoming calls, and was effective in marketing this to sign on large numbers to customers. From 1999 observing huge overcrowding in the systems, GP imposed incoming charge OF Tk. 2/- per to increase its subscriber's base by aggressive marketing campaign.

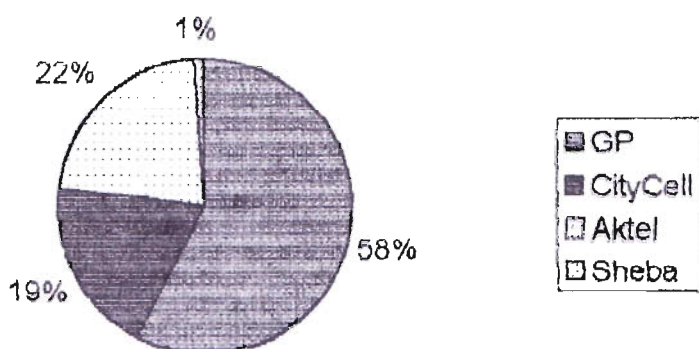
6.2 AKTEL (TMIB):

Telecom Malaysia International (Bangladesh) is a joint venture between Telecom Malaysia and A K Khan & co. TMIB also began operations in 1997 using the GSM technology. The company is servicing around 540,000 customers in Dhaka and Chittagong. TMIB offers its mobile services under the brand name AKTEL.

6.3 Sheba Telecom:

Sheba, a joint venture Technology Resources Industries Berhad (using brand name "Celcom") in Malaysia and Integrated Services Limited (ISL), a local firm, launched their GSM network in early 1998. Sheba is currently serving around 31,000 subscribers.

Present Market Share



6.4

Government fixed regulations

The telecom sector in Bangladesh is

regulated by the Telegraph Act of 1885 and the Wireless Act of 1933. The PBTl license was issued in 1989, and that was the time that the monopolistic powers of BTTB was broken to some extent. The three other licenses were awarded during November 1996, and are identical to

Grameen/Sheba/Aktel	PBTl (City Cell Digital)
Cellular mobile or fixed communications:	
Must be digital technology	Can be digital or analogue technology
License Duration:	
Licenses valid for 15 years, thereafter renewable annually based on performance	License valid for 20 years
Frequency:	
Assigned 10 MHz	Assigned a total of 40 MHz
Operator fee obligations:	
Operator pays 15% of line rental revenues to Ministry of Post & Telecommunications and call charges at actual to BTTB. Additionally, operators pay Tk.10 million annually as license fees	PBTl has to pay 15% of line rental revenues and call charges at accruals to BTTB. No license fees are payable
Coverage of cell sites:	
Coverage of each cell may not be greater than 7km in urban and 17.5km in rural areas	Coverage is not Restricted
Rollout Obligation:	
Operators must follow performance obligations or pay fines	No such obligations

each other, however the licenses awarded to AKTEL, Grameen and Sheba for their mobile cellular networks differ in some aspects from the license that PBTL holds.

The most significant differences are:

Some basic regulations

- The government fixed regulation also states that a cellular phone operator cannot only sell a line but has to sell set along with the line. It is to ensure that taxes have been paid on the sets used by the common consumers.
- No one foreign investor is allowed to have shares in more than one wireless telecom service provider.

6.5 Industry analysis by means of 5 forces model

Integrating the various five forces, we get

6.5.1 Bargaining power of Suppliers:

Bargaining power of suppliers is high because:

- Suppliers provide CDMA sets that cannot be found easily from many suppliers
- Suppliers do not depend solely on **CityCell** for significant portion of sales
- Products are not differentiated. However this has little effect on over-all supplier power
- PBTL cannot vertically integrate backwards as it does not have the capability to produce hardware whereas the primary suppliers may buy a majority stake in PBTL.

6.5.2 Bargaining power of Buyers:

Bargaining power of buyers is comparatively low under certain conditions:

- Tellular customers have significantly low bargaining power because of the high cost of procurement of a Tellular set. They have to rely on PBTL for spare parts and other help.
- Users of low cost packages may switch from **CityCell** to other packages but only at a certain cost: that of cost of purchase. In many cases it is seen that such customers run up bills equivalent to or above their credit limit then abandon their **CityCell** number. In such cases the buyer's bargaining power is higher.
- In cases of packages like **CityCell** 500/1000 buyers have significantly less purchasing power because of the high deposits paid to PBTL (Tk 2,500 for local T&T connections, additional Tk 2,500 for NWD and Tk 10,000 for ISD connections). This significant amount of investment means that customers cannot shift easily from one company to another.

6.5.3 Potential competitors:

Let us look at the potential competitor's scenario from the barriers to entry perspective:

Brand loyalty: Due to decreasing performance and slow progress in expansion of network, **CityCell** packages inspire less brand loyalty than before. However potential new entrants to the industry will be deterred by the high brand loyalty to Grameen packages. Essentially it is believed that the total potential market has been fulfilled by as much as three fourths. High brand loyalty to Grameen and the die-hard users of the other three companies: Sheba, **CityCell** & Aktel ensures that potential

entrants will be strongly discouraged by the high brand loyalty in current markets.

Absolute cost advantages & economies of scale: Current players have a more or less absolute cost advantage because they have already invested in telecom infrastructure and have recouped their investments. New companies will have to invest in equipment and will take considerably greater time to cover initial equipment-purchase expenses. Considering the size of the four companies already operating and the size of their investments, they will not take kindly to an upstart in the industry and may use as many competitive options as possible – price strategy, quality – to retain an upper hand.

Distribution channel: Another major barrier to entry is the access to distribution channels. With four companies competing in the current market environment, the distributors of mobile phones are becoming very limited. Moreover, many retailers will not want to carry more lines of mobile phone packages as they have to sell the ones they already have. Thus any increase in the number of companies will cannibalize into current sales.

Governmental regulations: In Bangladesh, the telecommunications market is still own by the state-owned BTTB. They are thinking of entering the mobile phone market. Thus they will not take kindly to new companies entering the industry. This may make them influence the government to introduce new legislation designed to restrain the business activities of new companies.

In all, we see that the barriers to entry being very high, there is significantly less likelihood of new entrants into the industry. Unless a dramatic change takes place in the economy or the opening up of regional borders for inter-country mobile services, which will enable a significant growth in demand, the current state of demand will remain

more or less stable at the current level. Thus investors will find less reason to enter into the Bangladesh mobile phone industry.

6.5.4 Threat of substitute products:

For **CityCell** the threat of substitute products is very real. Many customers prefer to use Grameen phone above that of **CityCell** primarily for the network reach. There are also a number of other factors that make **CityCell** vulnerable to this aspect of the five forces method of analysis.

However we should note that in case of packages are used for commercial use, **CityCell** has a significant hold over customers. In case of Tellular packages, the rates being so low, many clients prefer to stick with their **CityCell** Tellular sets even after experiencing technical and network problems. Moreover as the initial purchase of a **CityCell** set constitutes a significant investment – around Tk 50,000 all inclusive – an owner of a Tellular set cannot easily substitute his or her product.

6.5.5 Threat of New Entrants:

The entry barriers to this industry are very high as the government controls the licensing arrangements, and also the existing operators has made sufficient inroads into the market. This will strongly discourage new entrants into the market although the government has decided to give a few new licenses. But once a new license has been given to a company which have the ability like 'SingTel' of Singapore or 'AirTel' of India, **CityCell** will be in great trouble if the network and set availability remain same.

7. SWOT Analysis:

SWOT stands for Strength, Weakness, Opportunity, and Threat. This is a very important tool for a company for a company to analyze its internal external environment. Now, we will see a SWOT analysis of **CityCell**.

7.1 Strengths:

Capital: **CityCell** has a huge amount of capital. As mentioned before, that the Pacific Group, which is a well-established local organization of \$1000 million, owns 90% shares of PBTL, it was never required to borrow loans from outside or other investors.

Competitive price: Price is a big competitive advantage for **CityCell**. **CityCell** is the only organization, which is selling CDMA mobile phones with both way T&T facilities at the lowest rate. For example, lowest package rate of **CityCell** is Tk 6,999/= with T&T facilities. With T&T facilities the other competitors are no where near **CityCell**.

No 'Busy Network': Because of enormous number of channels, excess to **CityCell** mobile phones is very easy. The rate of call drops is very low.

Advanced technology: CDMA technology is the best technology for telecommunication. World-class mobile operators and world-class mobile phone manufacturers are advancing to this new technology. **CityCell** is one of the few mobile service providers, which are using CDMA technology. Where as other GSM mobile service provider has to make huge invest or will need time for transformation.

Low Cost: **CityCell** follows low cost strategies. It tries to cut cost in every possible way to maximize the strengths for future battle.

Centralization: Pacific Bangladesh Telecom Limited is a centralized organization that helps in easier coordination of business activities.

Dedicated Staff: Dedicated core staffs who are willing to provide significant labor hours to accomplish targets.

7.2 Weakness:

Fewer staff: The number of staffs working for **CityCell** is not enough at all. Far fewer staff than actually required in terms of tasks to be completed.

New technology: CDMA is the latest technology but it is not widely used. Still most popular option is GSM. **CityCell** cannot give international roaming because of few number of CDMA operator.

Low network coverage: Though **CityCell** started to provide mobile telecommunication ten years back, it is still in behind the other operators from the point of nationwide coverage. Grameen phone was able to use the optical fiber network of Bangladesh Railway through strong lobbying with past government for next twenty five years. That's why Grameen phone's expansion was huge. Where as PBTCL has decided to cover fifty-two districts within June, of which eighty five percent was has been done.

Lack of education: The subscribers are not educated enough to handle sophisticated CDMA mobile handsets effectively. That's why proper knowledge is essential to handle these mobile sets.

7.3 Opportunities:

Advanced technology: Since CDMA technology is the latest in the wireless telecommunication industry and most effective one, it is yet to find new potential in the short future.

Secured data transfer: Secured data transfer means **CityCell** has the potential to be the leading player once m-commerce took off.

Leader ship in telecommunication services: Bangladesh government has already started to provide license to private sectors to set up land phone. With full nation wide coverage and a huge capital it is possible to become the market leader for **CityCell**.

7.4 Threats:

New companies: If 'SingTel' of Singapore and 'Airtel' of India enter the market with full coverage and low price, then not only **CityCell** but also other mobile operators would be in great trouble.

Global companies: In India global companies like 'AT&T' of the United States and in Eastern Asia 'Vodafone' of the United Kingdom is working well. They might think to enter Bangladesh with higher capital. If so it will be a huge threat for **CityCell**.

BTTB mobile phone: BTTB may enter the mobile telecommunication industry. It might come to the business with unfair Government advantages and cause severe problems to all other mobile phone operators.

8. Assessing CityCell's Current State and Future Direction:

8.1 Current State:

CityCell packages are focused to follow the company's differentiation strategy. There are a number of market segments into which **CityCell's** potential and current customers can be divided. PBT always strives to

make each **CityCell** package released to be unique and noticed above that of the competition. They also try to attain distinctness in their sales and marketing strategy to make them seem like a unique, 'blue-blooded' mobile phone company. In order to do this, they have made a number of strategic choices, which may set them as being different from other companies; they also handicap them in a significant manner.

The primary strategic choice that has affected them is such a manner is their choice of technology. Although CDMA technology is far in advance from other technologies, it has yet to gain a significant acceptability in Bangladesh. Thus what has happened is that there is a serious shortage of CDMA sets and, as a knock-on effect, higher prices for the sets that are available. Worse, many sets are simply lying around due to a lack of spare-parts. Customers have to pay line rent for faulty or dead sets. Many customers are disconnecting their **CityCell** lines and buying cheaper packages from other companies. The detrimental effect this has had on operations is that PBTL is finding increasingly less room to maneuver and introduce new features in their service, which will help them combat competition. This also means that they have to fight for survival rather than for dominance. Inherently, PBTL's strategies appear to be more reactive than proactive. A very important aspect of current operations is the severe effect that centralization of organization has on operations. The regional offices are responsible for handling phones only in that zone. There is a severe lack of coordination between the various regional offices, which has a detrimental effect on customer satisfaction. Worse, the entries for each zone are done all on one floor in the head office at the vast majority of customers buying their sets directly from PBTL, it means that they are also dependent on PBTL for repairs and spare part needs. Thus the current staffs who work at repairs and servicing are severely overworked. This affects morale and employee satisfaction, reducing the efficiency of set-servicing process and thus has results in dissatisfied customers. In all PBTL is a company with immense potential, but it remains to be seen whether management can fully

harness this potential. The potential is present in all the factors of operations:

1. The technology is very advanced and has immense potential
2. The labor factor is strong with some very capable staff
3. PBTL has sufficient capital to undertake infrastructure investments
4. There is still a significant portion of goodwill towards the company from its stakeholders

What PBTL needs to do now is to harness all these positive factors, negate the detrimental ones and move forward.

8.2 Future Direction:

The Company appears to be moving towards a more customer oriented approach to its overall customer policy. Gone are the days when PBTL could dictate terms to its clients. These days PBTL has to spend an increasing amount of time covering its shortfalls and persuading customers to stay with them. This is especially worrying after what is perceived to be by many industry insiders a concerted effort by Grameen Phone to make headway into the corporate market – a domain that was once almost exclusively under PBTL. What PBTL is really looking for is a way by which it can seriously bounce back into dominant position. The primary reason for choosing CDMA is that they hope to be able to introduce next generation (2G) mobile phone features such as voice conferencing, Internet, sending visual data, etc into their services. It remains to be seen how successful they are in harnessing the full power of CDMA technology.

There is also a proposal to decentralize their organization in order to be able to better serve their customers in the far-reaching regions of the country. This means that many major functions will be spread out throughout the country divided according to customer regions. It is yet to be seen how much decentralization may occur, but it is a major issue under consideration. If the network expansion into North Bengal and

then into Khulna region occurs soon, there is a real potential, by virtue of superior technology, to gain a significant competitive edge over GSM rivals. Then there is the sale of data link to corporate clients. This will gather significant revenue for the company as well as solidify its position with its corporate clients as their primary information transfer and telecom provider. The incongruities between the various tariff plans of the various packages are to be removed both to make it much easier for customers to budget usage and also to increase the value for money of each package. There are no mergers or acquisitions in the future, but it is believed that Fujitsu may increase its holdings in PBTL and gain greater management control. If this happens, then the entire picture may change. This is especially important if we consider the fact that slowly boundaries are opening and technologies are improving. GSM will give way to more advanced technologies like CDMA and there will soon be no national boundaries as defined in the telecom industry. If that happens and the telecom sector is further liberalized, then PBTL can look forward to increased growth and revenue.

9. Products and Service offered by Pacific Bangladesh Telecom Limited

9.1 Post Paid Packages:

9.1.1 'CityCell 500' (Regular):

Commercial/ Business/ Personal use by high income consumers. This product can reach the Local T&T, NWD, IDD and all Mobile service across the country. This is one of the regular packages, which have the most number of subscribers. This package is known and admired to all. The subscription fee and the tariff are affordable than the other mobile

operators are offering. These days not only high-income group but also high medium and medium income groups use this service because of the lowest billing rate offered by **CityCell**.

Notes:

- Incoming BTTB calls Airtime Charges: 1st minute Free; 2nd minute onwards - 60 second pulse.
- Outgoing Calls Airtime Pulse: 1st minute - 60 seconds pulse; 2nd minute onwards - 15 seconds pulse.
- Credit limit is Tk. 2500/-

9.1.2 'Shabar Phone' (Mobile to Mobile with T & T Incoming and Limited Outgoing):

Personal use by middle income consumers. Significant number of customers is having this subscription. It is very popular among students and medium salaried servicemen and a good number people from different occupation are using this line.

Monthly Subscription Tk. 250				
Per Minute Charges In Taka				
	Peak (8AM-8PM)	Off-peak (8PM-11PM)	Super (11PM-8AM)	Off-peak
Outgoing				
To Any Mobile	4.00	3.00	1.50	
To Any Mobile (Roaming)	4.00	4.00	4.00	
To T&T	N/A	3.00 +T&T Charge	1.50 + Charge	T&T
Incoming				
From any Mobile	Free	Free	Free	
From T&T (1st Minute Free)	3.00	2.00	1.00	

From T&T (Roaming)	6.00	4.00	4.00
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Notes:

- T&T outgoing facility available from 8 pm to 8 am.
- First minute from T&T incoming calls is free.
- Super Off-peak rate is not applicable in roaming scenario.
- Pulse is applicable for Outgoing calls. The first pulse is 60 seconds and thereafter each pulse is of 15 seconds duration.
- 15 % VAT will be applicable on total monthly bill
- Monthly credit limit Tk. 1500 only.

9.1.3 'Amaar Phone' (Mobile to Mobile):

Personal use by mainly medium income consumers. Though not widely used but still this option is open for a group of people who just want mobile-to-mobile connection in low rate.

Aamar Phone			
Nationwide Mobile to Mobile			
Monthly line rent Tk. 200			
	Peak (8AM- 8PM)	Off-peak (8PM- 11PM)	Super Off-peak (11PM-8AM)
Outgoing			
To any Mobile	Tk. 3.00	Tk. 3.00	Tk. 1.50
One To One	Tk. 1.50	Tk. 1.50	Tk. 0.75
Incoming			
From any Mobile	Free		

Notes:

- Pulse is applicable. The first pulse is 60 seconds and thereafter each pulse is of 15 seconds duration.
- 15 % VAT will be applicable on total monthly bill
- Monthly credit limits Tk. 1000 only.

9.1.4 'Tellular' (Fixed Wireless Telephone):

Commercial/Business use by commercial institutions and business organizations. This package has been mostly used in village area, but recently we have seen that in city area many people using this service for mobile-to-mobile business because of low rate. High frequency antenna help the FWT sets to reach signals beyond the service area.

Monthly Subscription Fee Tk. 250	
Out Going Rate	Per Minute
To Mobile (Within Zone)	2.50
To Mobile (Other Zone)	5.00
To T&T, NWD, IDD	2.50 + BTTB
Incoming	
From T&T, NWD, IDD	1.50/min
From any Mobile	Free

Notes:

- Monthly credit limits Tk. 5000/-

9.2 Pre Paid Packages:

New generation subscribers are very much interested with this service. It is also helpful for limited income group of people. 'Aalap' pre-paid card is available everywhere and this service provides flat rate and nation wide roaming. A very significant edge that **CityCell** pre-paid packages have over other pre-paid packages from other companies is the package that features T & T incoming and outgoing. This feature has not been released by any other company along with pre-paid option.

9.2.1 'Aalap A' (Mobile to Mobile with T & T Incoming and Limited Outgoing):

In this option customers are given T&T incoming and out going facilities. Here a person can receive a call from T&T, NWD or IDD call with flat rate, which is the first in Bangladesh. Along with this incoming facility customer can also call some one within the zone to the T&T land phone.

Aalap A				
	Peak (8AM-8PM)		Off Peak (8PM-8AM)	
Outgoing				
CityCell to Others	6.00	1.66	5.00	1.66
CityCell to CityCell	5.00	1.33	4.00	1.33
One2One	2.50	0.66	2.00	0.66
To BTTB*	N/A	N/A	4.00	1.33
* BTTB charges applicable.				
	Peak (8AM-8PM)		Off Peak (8PM-8AM)	
Incoming	1st Minute	Following minutes	1st Minute	Following minutes
From Mobile	Free			
From T&T	3.00	2.00	2.00	2.00

9.2.2 Aalap 24:

Aalap 24			
	Peak (8AM-8PM)	Off Peak (8PM-11PM)	SOP (11PM-8AM)
Outgoing			
Any Mobile	6.00	5.00	5.00
To BTTB*	5.00	4.00	4.00
Friends & Family Numbers	3.00	2.50	2.50
* BTTB charges applicable.			
Incoming			
From Mobiles	Free	Free	Free
From BTTB*	2.00	2.00	2.00

9.2.3 'Aalap B' (Mobile to Mobile):

In this option customer will have only mobile-to-mobile facility. This option is offering pre-paid mobile in a low rate.

Aalap B			
	Peak (8AM-8PM)	Off Peak (8PM-11PM)	SOP (11PM-8AM)
Outgoing	1st Minute	1st minute	Following minutes
To any Mobile	5.00	4.00	2.00
Incoming			
From any Mobile	Free	Free	Free

Notes:

- All the above charges will include 15% VAT.
- From second minute 20 seconds pulse will be applicable.
- All of the packages have Nationwide Roaming Facility.

9.3 Supporting Services:

Short Messages Service: All the subscribers can have this service. The subscriber needs to apply to get the service activated their handset. The subscriber needs to write the text message and then send it to desired receiver.

Voice Mail Service: All the postpaid subscribers can have this service. To avail this service, they need to submit a request letter to the customer service department.

Call Conferencing: All the subscribers can have this service. To avail this service, they need to submit a request letter to the customer service department.

Call Forwarding: All the subscribers can have this service. To avail this service, they need to submit a request letter to the customer service department.

Wireless Application Protocol: This service can be provided with appropriate handset. To access Internet, it is still under construction.

CityCell News Letter: CityCell publishes a newsletter every month for the subscribers. This newsletter works as a communication link between the company and the customers. This includes different plans, recent happenings in CityCell and CDMA's latest information.

CityCell Online Self Care: CityCell has started Online Self-Care means you can get 24 hours customer service wherever you are (if you at home or even at office) and an innovative new way for postpaid subscribers to view their latest account and billing information anytime via internet. To get this facility you just have to log on www.CityCell.com/onlineselfcare. Online Self Care ensures you always up to date with your billing status, anytime anywhere. Whenever you are logged on then you have to enter your phone number and account number as a password to see your bill.

This service enables you to view the following at your convenience:

- Latest payments
- Payments outstanding
- Mode of payment
- Payment history

Online Self Care also allows you to lodge service related queries and complaints online. "Convenience and timelessness are crucial for customers and Online Self Care provides maximum flexibility and visibility of customers' said Intekhab Mahmud, CityCell's Head of Marketing. " We have introduced this service as part of our ongoing commitment to provide our customers with innovative services that will make their life easier," he said.

CityCell Customers now able to Send SMS to GP Customers: **CityCell** and GP recently signed a memorandum of Understanding (MoU) allowing

customers from both operators to send and receive SMS from each other's networks. The ability to send SMS across different operator networks is a first time in Bangladesh and will give customers from both operators more flexibility and help them to communicate more effectively.

CityCell Cash Card: CityCell's recent introduction of Cash Card for making bill payments for postpaid subscribers. Customers can find it easily and convenient to be able to pay their bills over the phone with Cash Card from anywhere they are and at anytime.

Three types of Cash Card:

- Tk. 1000/
- Tk. 1500/
- Tk. 2000/

Benefits of Cash Card:

- Customers don't have to wait for the bill statement.
- Cash card allows customers to avoid disconnection by making advance payment from anywhere, anytime.
- Customers can avoid waiting in a long queue in the bank.
- Customers in the remote area (where banking facility is unavailable) can get uninterrupted service.

Process to use the Cash Card:

Payment of post-paid bill through cash card is very simple. Just follow the following steps:

- Gently scratch the silver panel to reveal the secret Cash Card number.
- Dial *222. When prompted, press "1" for English instruction or "2" for Bangla instruction.
- When prompted, enter the 13-digit cash card secret number, followed by the hash (#) key.

- The number you have entered will be repeated automatically for your confirmation.
 - If the entry is correct, press '1'.
 - If it is wrong, press '2' and reenter the cash card hidden number followed by the hash (#) key.
 - You will hear an updated **CityCell** account balance within 10 seconds
- Take care in entering cash card number. If three wrong (consecutive confirmed) entries of cash card number are made, then it will be disconnected.

This is part of **CityCell's** ongoing commitment to improve the customers experience with **CityCell**. Because we care!

Good luck on your way to hassle free Cash Card journey!

E-mail over SMS from **CityCell**: E-mail facility is available for all the **CityCell** Subscribers. They can send to and receive emails from any email address anywhere in the world. Any **CityCell** customers will have an email address as follows:

<mobile number>@sms.**CityCell**.com.

If your mobile number is 011121121, your email will be: 011121121@sms.**CityCell**.com

9.4 Value Added Services:

- 9.4.1 Dial *120 for Billing Status
- 9.4.2 Dial *121 for 24 hour Call Center
- 9.4.3 Dial *122 for Local & International News
- 9.4.4 Dial *123 for Sports News
- 9.4.5 Dial *124 for Flight Schedule
- 9.4.6 Dial *125 for Train Schedule
- 9.4.7 Dial *786 for Prayer Timings
- 9.4.8 Dial *999 for Police Defense
- 9.4.9 Dial *505 for Hospital and Ambulance Services

- 9.4.10 Dial *911 for Fire Brigade Service
- 9.4.11 Dial *101 Home Delivery Food Service
- 9.4.12 Dial *800 for Pre-Paid Service
- 9.4.13 Dial *888 to Recharge Pre-Paid Cards
- 9.4.14 Dial *811 to know the Pre-Paid Balance
- 9.4.15 Dial *222 to Recharge Cash Cards
- 9.4.16 Dial *101 to the Restaurant nearest to your current location
- 9.4.17 Dial 4444 to send an Email
- 9.4.18 Dial *404 to Flower Delivery
- 9.4.19 Dial 2525 to get the latest score via return SMS instantly
- 9.4.20 Dial *2222 to hear the update NTV news

9.5 Easy Ways to Pay the Bill with CityCell:

CityCell understands how important it is to offer convenient and hassle-free ways to pay the monthly bill. There are currently 7 convenient ways to pay the bill:

Cash Card: Available at all authorized dealer or retail outlets countrywide. Using **CityCell** phone can use cash Card anytime and from anywhere to pay bills.

Advance Payment Slip: Available at selected banks where **CityCell** bills are collected.

HSBC Easy Pay machines: Available at three convenient locations in Dhaka.

Standard Chartered ATM machines: If you are a customer of Standard Chartered Bank, you can settle your bill through their ATM machines with your ATM card.

Eastern Bank Limited Internet Banking: If you are an EBL customer, simply log on to www.ebl.com.bd to settle your **CityCell** bills online.

Easy settlement of bills at the Cash Counters at **CityCell** Customer Service Centers in Dhaka (Mohakhali), Sylhet and Chittagong.

At banks: Bills can be paid at all banks mentioned on the back of the **CityCell** bill statement.

9.6 SMS Banking now Available for CityCell and Bank Asia Customers:

CityCell customers who have accounts with Bank Asia are now able to access bank account details by simply sending an SMS from their **CityCell** phone. Under a recently signed service agreement, customers are able to request their latest balance, including balance currently under clearance, and last transaction information and receive the updated information via return SMS. The SMS banking service also provides customers with alert message on low account balance, promotional messages and messages on special occasions.

"SMS Banking is a convenient way for **CityCell** customers to stay updated on their account balances at all times," Mr. Intekhab Mahmud, **CityCell's** Head of Marketing said.

"SMS Banking will pave the way for many more advanced financial services through mobile phones and **CityCell** looks forward to offering these to customers once they implement CDMA 1x technology at the end of this year," he added.

9.7 Electronic Service Delivery:

9.7.1 Interactive Voice Response

Now **CityCell** subscribers can access information regarding their bills, current package and also lodge complaints by just dialing 120 from their mobile phones.

The Process:

Just dial *120 and press the (SEND) calling button.

You will hear a automated response which asks you to press 1 for English or 2 for Bangla.

Then it asks for a password, the default password is 1111 (if you have not changed the password) once you key in the password you will hear a response which will repeat the password.

Then it will ask you for a confirmation. If you have keyed in the password correctly press 1 or else reenter the password.

Once the password is confirmed and correct then the system takes you through an automated menu, which is: -

- Dial '1' for unbilled amount.
- Dial '2' for last billed amount.
- Dial '3' for current outstanding.
- Dial '4' for complaint booking.
- Dial '5' for complaint status.
- Dial '6' for changing password*.
- Dial '7' for information on new schemes.
- Dial '8' for fax back services. (Where the current package will be automatically faxed to the caller in a specified fax number.)
- Dial '9' if you want to go through the menu once again.

*The password is 4 digits long and only numeric (It will not accept any alphabets). The calling or SEND button should be pressed only once throughout the process, i.e. only when the process is initiated after dialing *120.

9.8 Freedom to Choose with RIM –Based Handsets:

CityCell recently introduced CDMA RIM- based handsets in addition their selection of regular pre- programmed CDMA handsets. RIM stands for Removable Identification Module,, which stands for customer's data, including personal phone books, and can be removed and inserted into a new CDMA RIM compatible handset at any time, giving the freedom to change handsets whenever someone likes, provided it's a CDMA handset.

The advantage of RIM based handsets goes beyond simply switching handset. RIM not only gives customers the freedom to change their handsets at any time, but also to enjoy the benefits of the CDMA network technology.

Being the only CDMA operator in Bangladesh, **CityCell** has really brought the world's best mobile technology to Bangladesh and now customers also have the option to enjoy the flexibility of choice with RIM based CDMA phones.

CityCell offers the convenience of RIM- based handsets to customers and is gearing up to increase its availability in the market. Another aim is to provide the customers with the best technology, best service and maximum convenience.

9.9 Workshop:

This department may be considered to be actually two departments. The Engineering department supervises the primary workshop where sets are actually repaired but the workshop itself is run by the CCD. The other

part is receipt and delivery of faulty sets. This is done at the front office. Customers can repair their faulty sets through the workshop.

10. Conclusion:

In this report the main focus of discussion was 'Activation & Verification Process' of CityCell. The whole system has been described elaborately keeping in mind the most important segments of the whole system. In addition the data flow diagram of the system adds a clear understanding of the system.

This intricate analysis of the system has given me a clear understanding, and on the basis of the understanding I have come up with some minor shortcomings of the system. These shortcomings are:

- The system itself is a very lengthy process and involves too many activities to be completed in a very short span of time, which does not make it a very reliable one.
- The verification of customer name & address is done by the activation and verification executive therefore if the executive is not satisfied with documents then or she returns it to the Sales executive, dealer, distributor, kakrail, sylhet or Chittagong office. This makes the process even more time consuming, as a consequence the customer is kept waiting. Ultimately, the

customer is frustrated which can be a discredit for the cellular company.

- In the system the process is a continuous activity, where one stage can move onto the other stage only upon the completion of the previous step. Thus if something goes wrong in one stage the whole system gets hanged.
- The activation process, which is performed using the Unicorn Software, is too lengthy. There are too many steps to be completed in the software before the customer is successfully activated.
- The jobs, which are done manually, involve a tremendous amount of human judgment and subjective analysis. More over this analysis is judged by various people of different designations. When such is the condition, the system goes through much indecision, confusions and disagreements, which makes it more time consuming.

Considering the above shortcoming the following recommendations are presented:

- The verification of a customer's name and address should be done when while the mobile is being sold. The sales executive should have the freedom to verify the customer's name and address. In this way the activation executive doesn't have to waste time verifying documents. So, if the documents are not correct then in

the first step itself the customer is told to bring proper documents for verification. As a consequence, customer dissatisfaction will be greatly reduced.

- The UNICORN software should be upgraded with newer and better software, in where the whole duration of activation process is cut down to minimum time duration.
- The whole process should not depend on so many personnel for approval. People should be given the empowerment for making decisions.
- The processes should be simultaneous. While one executive does one job the other person should start the next process immediately.

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