

**ANALYZING THE DIFFERENT MOBILE PACKAGES AND
OTHER PARAMETERS AND FORMALIZATION OF COUNTRY
POLICY FOR BTRC ON MOBILE TELEPHONY**

**Zeaul Hasan
Student ID: 02101079**

Department of Computer Science and Engineering

MAY 2006



BRAC UNIVERSITY, DHAKA, BANGLADESH

DECLARATION

I hereby declare that this thesis is based on the results found by myself. Materials of work found by other researcher are mentioned by reference. This thesis, neither in whole nor in part, has been previously submitted for any degree.

Signature of
Supervisor

Signature of
Author

ACKNOWLEDGMENTS

Special thanks to Dr. Syeed Salam who taught me how to think of random data clearly when I was fortunate enough to be his research assistant, to Dr. Abu Sayeed Khan, GM (Finance & Account), BTTB, Director, Teletalk Bangladesh Ltd and Md. Athar Ali Sarkar, Asst. Director, Spectram Management, BTRC, for supporting this work in ways too numerous to list, to Shoeb Ahmed, VAS Engineer, Banglalink, ShebaTelecom (Pvt.) Ltd, accepting the difficult task of overseeing this work to completion, and to my thesis partner Mushfiqur Rahman for his constant support and enthusiastic attitude. Their lively assistance and strong favor have given my thesis a success. I show my hearty gratitude to every one of them.

ABSTRACT

Bangladesh is a developing country. Like all other TELECOMMUNICATION sector is also weak compare to other countries telecommunication.

Our goals are to search the better policy for the telecommunication companies of Bangladesh. And taking the good ideas from the developed countries and suggest our government to implement those policies in our NTP.

So often Mobile companies of Bangladesh offer packages. But people don't know which packages are beneficial for them, as there is so many packages. So we want to develop such software, which can be useful to sort out the better package.

TABLE OF CONTENTS

	Page
TITLE.....	
DECLARATION.....	1
ACKNOWLEDGEMENTS.....	2
ABSTRACT.....	3
TABLE OF CONTENTS.....	4
CHAPTER I. INTRODUCTION	
1.1 Analyzing the different mobile packages and other parameters and formalization of country policy for BTRC on mobile telephony	6
Objective.....	7
CHAPTER II. POLICIES FOR BTRC	
2.1 Change in license acquisition fee.	
2.2 Free help line Facilities	
2.3 Refund policy to be issued for SIM purchase.	
2.4 Revision of the packages by BTRC.	
2.5 Ownership transfer.	
2.6 Technology transfer.	
2.7 Formation of the board of directors	
2.8 Encourage fair competition amongst the service providers.	
2.9 Increase private investment in the telecommunication sector:	
2.10 Promote infrastructure development, especially infrastructure that will increase teledensity.	
2.11 Different Locations For the mobile companies	
2.12 Co-ordination among the companies	
2.13 Preservation of Foreign Currency	

CHAPTER III. CONSUMER RIGHTS.....16

- 3.1 Remission of line rent for the post paid users
- 3.2 Change in annual license renewal fee.
- 3.3 One license One User.
- 3.4 Rational calling rate for the prepaid users
- 3.5 Network Failures should discount call charge
- 3.6 Privileged to receive overseas calls
- 3.7 Assurance of payment security
- 3.8 clear module for the package description and pricing:
- 3.9 Customer service and technical support
- 3.10 SMS cannot be used to request permission for SMS advertising
- 3.11 Rights to change or alter packages with in the same network

CHAPTER IV. A SOFTWARE TO HELP THE CONSUMER IN CHOOSING A PACKAGE23

- 4.1 Introduction
- 4.2 Forms Description
- 4.3 Reports

REFERENCES.....33

CHAPTER I

INTRODUCTION

1.1 Analyzing the different mobile packages and other parameters and formalization of country policy for BTRC on mobile telephony.

Telecommunication is now a vast section of knowledge. Business in this industry is expanding beyond imagination. Its future prospect and our national economy are enviably Related. Our study comprises the mobile consumer rights, action and role to be played by BTRC and implementation of a software which gives a sharp idea about the selection of the right mobile operator service.

Bangladesh is one of the most under developed countries of the third world. Illiteracy is a disgrace up on the people over here. People with inadequate knowledge and skills are hoodwinked by the wrong choice of their mind. The software encoded by us illustrates the details of every package of every mobile company. It calculates the call rates and compares it to his mobile phone being used by him. Through the calculation, it reckons the best suitable package for a user.

The idea behind the outset of the software was not just to help the general users in choosing their right package but to keep people up to date about the mobile telephony.

Our industrious efforts have resulted in the successful development of this useful software which we recommend for the BTRC.

Our thesis highlights the basic rights of the customers, economic male-policy of the mobile companies and the possibility of our national economic uplift through some modifications of the principles. We have sorted out the administrative leakage and financial misapplications of the BTRC and its proper measure to improve the standard of service as well as to boost our economy.

We hope that the software developed by us is user friendly and compatible with any operating system. The use of this software will guard against violent mobile corruption and eradicate the illegal use of mobile SIM cards. The implementation of our suggestions and the use of this software will jointly help the mobile industry to lead to an advanced and well trained generation.

Objectives

- **Recommending policies for BTRC:** The current policies of BTRC are too flexible and shaky. To improve the standard of service, develop proper customer care and maintain national economic interest , policies have to be recoded. We have quoted a number of wrong policies of BTRC and suggested for the modifications.
- **Recommending policies for cell phone operators:** The cell phone operators are now also gaining benefits from enormous demand of mobile communication. The expansion of this industry along with the preservation of consumer rights and national economic background , we have advised several policies for the phone operators.
- **A software to help the consumers in choosing a package:** There are numerous packages offered by all 5 mobile operators in Bangladesh. The consumer society can be categorized into many divisions like students, business persons, officials, and so on. The miscellaneous types of services stimulate confusion among the customers and they are misguided by a wrong package for him. The smooth and sharp algorithm of the software helps the users to choose the correct service for him.

CHAPTER II

POLICIES FOR BTRC

2.1 Change in license acquisition fee

The license issue fee in Bangladesh is as low as 50 million dollars. The greater the fee, the higher the foreign currency stock is. Bangladesh is undoubtedly lagging in world economy market. We are still indebted by the world bank in various sectors. The acquisition of foreign currency is the way how we should alleviate the crisis.

On the other hand, based on the same principle, the neighboring country Pakistan charges 291 million dollars which is 6 times the charge by BTRC. As an example, warid Telecom accessed Pakistan Mobile market they paid 291 million dollars as the license fee. The conscience stricken factor is that, WARID has entered Bangladesh mobile industry only for 50 million dollars. Adding fuel to the burning fire, we mention that the rest of the 3 international companies have picked their trade license absolutely free of cost. Free accessibilities of 3 international companies even in due rate undergo the loss of 150 million dollars in the hall of national economy.

The planned and calculated policy by BTRC can easily reduce foreign currency deficit immensely. They must increment the fees to grab maximum interest of foreign investment. License issue should be dealt with strict applications of law. Telecommunication is prospective field of foreign currency acquisition in our country.

2.2 Change in annual license renewal fee

The license renewal policy of BTRC differs significantly in comparison with that of the other sub-continental countries. Here in Bangladesh, the validity period of a license holds for 10 years and the renewal fee is 50 million Bangladesh currency.

Whereas, in Pakistan, the license is valid up to 15 years and 15 years they need to renew with the same amount of money deposited to issue the license. This unfolds big medium of earning and saving foreign currency and boosting national economy.

The low cost for the renewal is too flexible for a competitive international economy market. We must increase and revise all the principles with regards to license validation in our country.

2.3 One license One User

A common concept in trade and commerce is legal issue of license. There must be a single license holder for a single license. But funny thing is that this common methodology is violated in our mobile industry. Law wise, a license holder's name can not be changed. In that case, a license must be repurchased by the business company paying full fee for the registration. The trader must be identified by the sanction committee for his accessibilities. But for two leading mobile companies of Bangladesh the law is violated. We have the valor to note that with the assistance of some high officials of BTRC, Bangla Link is trading against the license of SHEBA while CINETEL is doing business against the license of CITICELL. Both companies have bought some shares of the company and using their own signature in the license.

This violation act is equivalent to forgery. And fine or penalization should be imputed upon them. Instead, this financial big deal has been overlooked on the media and it has ultimately escaped from the budgetary or important trade concerns. The law must be implemented and observed to ensure smooth economic run of the country.

2.4 Revision of the packages by BTRC

Mobile companies trying to popularize themselves are now involved in a blind game. Some are announcing free calls through out the day and night some are offering free calls all through the night. This vulgar race between the mobile companies has

directly attacked the young generation. In the swim of talking along the night, they are missing their classes in the schools, talking on mobile even on driving is causing accidents and so on. The adverse affects of these harmful packages must be mended. The worthless packages must be denounced by BTRC. They should enact principles to check the misuse of mobile. More over, night long or day long free call facilities put extensive pressure on the network. And people trying emergency calls are facing network jam. A patient can not contact the doctor in time; an informer can't notify the authority early enough to grab the criminals. People are forgetting their important tasks in the air of chatting, talking and valueless gossips. BTRC should form a committee to guide the mobile companies to their package offers.

2.5 Ownership transfer

At present in Bangladesh except Tele Talk the other four mobile phone operators are foreign investor. This foreign company comes here to do some business. As these foreign companies are the major share holder of this mobile phone operator so they are the real owner of this phone companies.

Initially these companies invest a huge amount of money in this business. So as other business company there first target was to get recover from that invest. After that they will make profit as many as they can which is also a large amount of money. Since they are the foreign investor and if they will make business in our country for a long time then it will be unfair to us as they are taking away almost all the profits from our country. So after a certain period of time there should be a transfer in ownership.

At present these foreign investor are holding 68% and more share of the mobile phone operator. So after 10 years from staring the company there should be a slightly change in the ownership. It will be like 60% of share holder of the company will the foreign investors and the other 40% share will be owned by

the local share holders and after 20 years the local share holder will own the 60% share and the foreign investor should own the rest of 40% share of the company.

2.6 Technology transfer

When the foreign investors will leave the country after the ownership has been transferred solely, there should be also a transfer of technology as well. It is known as "Tech-Transfer".

For the technical support there should be also a training session for the local people on how to handle and use the equipment and thereby build their expertise. This training session will be held in future after the acquisition of the companies by our local owners.

2.7 Formation of the board of directors

As the entire private mobile operators except for the Tele Talk are foreign investors and they have a huge share of the company so they are taking away a big percentage of money from our country. Since they have a big share so in the board of director panel they also have a big percentage. It means that almost all the top level officials of this company are foreigners who make decisions of the company. Since they are foreigners so they only think for their profit not from Bangladesh's point of view. But if the directors are from Bangladesh then they may think about the profit of the company. So it is important that at least half of the directors of the board of director panel are from Bangladesh so that they can represent our country as well as make a wise decision which will help the country to make a profit and make an established position in the world's telecom market.

2.8 Encourage fair competition amongst the service providers:

There should be a fair competition among the mobile phone operators. If the big operators launch some huge promotional activity then the small operators may not compete with them. Few days ago Djuice offer free talk time for the whole talk time and Aktel also offer the same free talk time at whole night to their

subscriber. As a result some people who were using the other operators' mobile phone transfer to this two big companies. But it is quite difficult for the relevantly new companies like Tele Talk and Banglalink for offering this sort of free talk time offer to their subscribers. So the small companies may loose their subscriber without any valid reason which is not justified. But now BTRC has made a rule that companies cannot offer this sort of free talk time for the whole night for marinating a fair competition.

2.9 Increase private investment in the telecommunication sector

Expansion of telephones in the private sector is based on purely conservative estimates. The expansion in this sector could perhaps be much more as it is expected that the private sector will play an increasingly significant and prominent role in the development of the telecom sector. All necessary facilities to encourage such growth of the private sector will be readily forthcoming.

Since Bangladesh is a poor country so it is quite difficult for the government to make sufficient investment in the telecom sector. It will be a slow process if the government is the lone investor in this sector. So in order to making a better telecom sector for the country and increase the teledensity the private investment is mandatory. The private company may take help from the foreign investor to make this sector into a world class standard.

In Bangladesh already private investment has taken places. Except for the Tele Talk the other entire mobile phone operator is privatised. Recently 45% share of Pacific Telecom Bangladesh Limited has owned by the Singapore telecom company Singtel operator and the Sheba Telecom (Pvt.) Limited has been owned by Egyptian company Orascom. Now another middle-east company Warid Telecom is coming in this telecom market for business. So the private investor has already made a great contribution in our telecommunication sector.

2.10 Promote infrastructure development, especially infrastructure that will increase teledensity

The International Telecommunication Union (ITU) has urged Government to recognize basic telephone as a 'human right'. The contribution of the mobile phone operator is great in making this telephone affordable and easily available to the population. Since in the rural area the land phone line has not been reached yet so it's the task of the mobile phone operator to do this job by making the best network coverage for increasing the teledensity. Some of the remote areas don't have any kind of telephone facilities. They have to go through a long way to make a call. But mobile phones make their life easier. Currently in Bangladesh not all the sub-districts are under a telecom network. But it is important to bring all the thanes or villages under a telecom network in order to increase the teledensity of the country.

In case of a country like Bangladesh where it may perhaps not be immediately possible to provide telephones to every individual, increase in Tele-access or Tele-reach is also of the utmost importance. For this purpose, it has been planned to give one hundred thousand mobile telephones to cover each village of Bangladesh. This mobile telephone will, in fact, act as a community telephone and will be placed with one individual in each village. Such an individual will pay the normal charges to the operator for use of the telephone, while keeping a margin for him. Through this mechanism, all the villages of Bangladesh will hopefully be brought under a telephone network, while at the same time about a hundred thousand people will have additional income, which would help increase Tele-reach on the one hand and reduce poverty on the other.

2.11 Different Locations For the mobile companies

The central service stations of all the 5 mobile companies are located in Dhaka. While the rural area of our country constitutes six major divisions. Consequently, smooth network coverage mostly confines with in the circumference of Dhaka city. But ours is an agro based economy. Agricultural sectors even lies in remote districts. Communication for trade is inevitable. But the network coverage over some non-urban areas is negligible and the national interest is being obstructed.

On the other hand, establishment of service operator stations will accelerate the pace of urbanization. It will open affluent scope for employment facilities in rural areas of the countries and release the pressure from the capital.

Most importantly, for the best performance of the mobile networks, BTRC should split the country into several zones. It should issue zone wise license to the operators and ensure proper network support for the customers. Besides, customers will have the freedom to choose the best suitable service for him. And the way to reckon suitable packages with in a particular locality will be unambiguous.

2.12 Co-ordination among the companies

Co-ordination between the companies of an industry is highly recommendable for the successful business as well as the expansion of the industry.

Mobile business in Bangladesh is now by far in oligopoly environment for the market competition. Grameen holds maximum authority while AKTEI is heading forward steadily. But the network coverage in few areas of Grameen and Aktel is not as trustful as that of comparatively smaller companies like Bangla link and Teletalk. But the alluring offers thrown by the big companies beat all the benefit criteria of small companies. Users under the coverage of a smaller company might not devote to the small company's service leaving the mega offers of big companies. For example, Grameen djuice offered free call after mid night. People interested in talking at night must prefer Djuice regardless of its performance in their concerned areas.

To maintain equity and ensure proper service, big companies like Grameen , Citicell should come forward to sign in a mutual agreement. In fact, this agreement will not strike any blow for the big companies but would rather

help distribution of equitable service all round the country. Big companies should not just stand in break even point and the small Companies will not exit.

2.13 Preservation of Foreign Currency

Out of 5 companies, 4 of them are financed by foreign investors. Our stock of foreign currency is very low. The limited amount of currency obtained by our national investors doesn't fill in the shortage of foreign currency. But to the contrary, the colossal amount of profits earned by the mobile companies are directly passed abroad. The stock of our own foreign currency is becoming deficient. For, example, Grameen Phone and Aktel cumulatively invested 50 million dollars in several fields. The single income of Grameen out of its investment is alone 64 million dollars. If all this money is consigned to foreign countries, our national economy will be at stake. So, BTRC should develop a policy so that dollars to be consigned can not exceed a certain amount.

Mobile company shares should be offered in the open share market. Almost 70% shares of the mobile companies in Bangladesh are owned by foreign investors. Bangladesh Govt issues free trade license for their marketing. And they take the maximum advantages of this free trade police. They earn a huge amount of foreign currency from our country to their country and our national economy suffers the deficit of foreign currency. To preserve foreign currency we must renovate the mobile trade policy. Besides, shares should be released in the local share market.

CHAPTER III

CONSUMER RIGHTS

3.1 Remission of line rent for the post paid users

Line rent should be omitted for the post paid users. The extra amount of money paid as line rent puts a big burden for the customers. “no use no pay” should be the basis of post paid billing. Not just for the economy reason, making no call in a month, still standing in the long queue for paying the bill should be a big monotony for users.

Addition of line rent discourages the users to choose post paid package. The fixed amount of money paid for the line rent spoils the economical use of a particular line. Consequently, in the long run, an economical user with limited budget fails to continue his account.

If line rent is to be charged, the operators should add a bonus talk time to the users. This will diminish the charge as well as it will encourage the elite users to enjoy talking. They will not need to count pulses of seconds to save their pre-paid account balance. And it will fairly justify the billing margin for the post paid users.

3.2 Free help line Facilities

Every Mobile company offers one or several help lines or 24 hour hot line for customer care. The helpline is either an automated answering machine or connects to customer care operator for help or guidelines. The call made at a

helpline number should not charge a customer. But regrettably, Not more than only one mobile company”Citicell” offers free helpline facilities.

Communication between the service operators and the users should be easy and free. The recent demand of mobile communication has posed various complications over the network. A general user or the users in the non-urban zone don't have adequate knowledge to cope up with server updates or reconfigure his/her mobile settings. In fact, helpline is a burning need for the users to avail for various needs.

Not regardless to add that, the number of pre-paid users is increasing day by day. And to refill their account different methods have been introduced like Flexi Load, E-fill and so on. But with the enhancement of more facilities, more complexities have struck. During the refill, in case, successive wrong pin codes can block a SIM. Or, other balance transfer facilities invoke confusion among the customers. So, more or less, from dealers to customer help line utility is rising high. But the charge to communicate with helpline hinders the communication so also the relationship between the server and the customers. As an example, a customer with nil balance can't reach operator's service with regards to his new refill or any recharge complications.

3.3 Refund policy to be issued for SIM purchase

Mobile is no longer a fashion nor does a mobile phone add to status. It has become an invariable part of our daily communication. And the mobile companies are now present with numerous packages. A customer should be allowed to experiment with few services to identify his suitable package. That is, money spent for the purchase of a SIM should be refundable up to a certain limit of time to some extent from 60 to 80%. And for the change of a service with in the same company should not claim any demurrage. As to switch between two packages of AKTEL, “Aktel joy” and “AKTEL exceed”, the due addition of the price level should just be counted.

3.4 Rational calling rate for the prepaid users

Per second pulse should be introduced by the mobile companies. Normally, the prepaid billing criteria starts from 20s pulse. But a customer does not exactly count for his pulse while talking. An extension of 1 additional second will charge him for the full 40s duration. So, fair and justifiable call rate adjustments have to be brought out.

3.5 Network Failures should discount call charge

Network failure, off late, is a common problem. Users suffer from not only from their communication default, but also financially. Network failure means the absence of network coverage or any miscommunication between two terminals. It can slip important information, and it does penalize for the customer. He is to pay as per the call duration despite the network failure.

Network software must be upgraded to solve this problem. The software must be encoded sharply enough to flag errors or detect network failure to readjust his bill.

3.6 Privileged to receive overseas calls

Mobile communication does not mean only chat with friends, or emergency communication device. It bears great value now days to connect to the whole world.

Earlier, the mobile was an extravagant product of elite people. But in proportion to the economy of our country, Grameen first introduced mobile to mobile package which has widely spread across the country. This concept of limited mobile facilities is designed in such a way that any mobile phone and PSTN phone can reach those subscribers except BTTB's fixed phone, though the new fixed phone services launched by private operators can be reached by these "Mobile-to-Mobile" phones. These peculiar phones are causing a revenue loss worth Taka hundred thousand crore per annum.

As Grameen Phone (GP) first launched its mobile service, it had to seek interconnectivity from BTTB. But BTTB then could not provide necessary interconnection due to various constraints. As a result GP started to increase their subscribers without BTTB's interconnection aid and introduced the GP-GP package. As the package got tremendous popularity in the market, other mobile operators started following GP's business policy. Currently, 80 lakh mobile subscribers of the country's total one crore mobile subscribers belong to this criteria.

Mobile to mobile package limits the network over mobiles. The basic support of BTTB land phone is usually off. More over, every where in the country mobile phones are facilitated with ISD incoming and outgoing. So, Mobile to Mobile service should include at least overseas call reception. They should not deprive the users of their legal rights for their commercial interest.

3.7 User track record by a telephone directory

It means to register and authenticate all the mobile numbers. Mobile phones have eased the flow of corruption across the world. To maintain a directory by mobile operators will restrict their authority in the world of crime. From the phone book or directory, any user can be traced. Even they should create a profile for every user in the server that will aid our detectives and other law enforcement committees to identify the criminals.

3.8 Assurance of payment security

Today in Bangladesh we cannot shop with our cell phones but in near future we may have the technology to buy and pay several kinds of bills through our cell phone. We can use our cell phone just like the credit card.

It foreshadows a bright mobile future for our country. It will enhance mobile utilities and mobile will perform effectively versatile operations. But it has to be secure. Security should be developed so that whenever a transaction is

made, customers must prove their identity, for example with a pin code or personal code. The customer's identity must also be checked when payment is made. Assurance of safe transaction has to be confirmed by the mobile companies.

3.9 clear module for the package description and pricing:

Mobile companies attract the users by various schemes in their package. But any gap in their expression might mislead the general customers. Every facility has to be specified to the point. Sometimes, they play hypocritical games in narrating their package. They should explain it in detail so that a customer may not be misled.

Mobile call rates at the first pulse and the rates next should be vivid. The charge at the first pulse is mentioned. But the increment in the next pulses must be noted to make the customer judge the economy level. The call chart must be published in understandable format.

3.10 Customer service and technical support

Mobile consumers have the right to courteous customer service and technical support that are easily accessible 24-hours per day and seven days each week.

Mobile consumers must receive replies to all inquires within 24 hours. Suppose the consumer is not receiving any incoming calls or their outgoing calls are blocked then they should get the solution of their problems within a day. Mobile consumers must have their issues resolved quickly and respectfully.

Customer service assistance should be available through:
Toll-free phone service, and/or real-time online chat with service personnel, as well as via e-mail.

3.11 SMS cannot be used to request permission for SMS advertising

Any company cannot send commercial text messages to consumers' mobile phones without receiving written consent to do so in advance because this is some sort of direct marketing. Asking for permission via a text message could generally be considered as direct marketing.

If a customer has already purchased a product or service from a company, it is allowed to use text messages to market similar goods to the client. However, this also requires that the customer be told that his or her contact information might be used for direct marketing; in addition, the possibility of forbidding the use of this information must be offered. Refusing consent to receive further direct marketing must be possible each time the customer is sent a message.

3.12 Rights to change or alter packages with in the same network

Customers should have the choice for changing their package facilities from one option to another.

For example, in Aktel pre-paid packages there is an option to change from their regular package to **exceed** option. This change makes the customers to have a lower call rate for calling the Aktel numbers. For this change the company charges 100 taka from the customers as a subscription charge. But after converting in to **exceed** option they don't have the chance to come back in their regular normal pre-paid option. Similarly in Grameen Phone (GP) pre-paid package there is a time period called **My Time**. The consumers have to select their choice for **My Time** either from 6 a.m. - 9 a.m. or from 2 p.m. - 5 p.m. During this time the call rate between GP to GP is lower than the regular tariff. The same GP pre-paid package have another choice called **My Choice**. In **My Choice** option the consumer have a lower call rate than the regular call charge.

To convert this package under **My Choice** option the company charge 25 taka from the consumer as subscription charge. But under **My Choice** option the consumer do not have the **My Time** facility. But if a subscriber convert his/her easy pre-paid package to **My Choice** option they do not have the chance to convert his/her package to regular easy pre-paid package.

So customer should have the open choice for switching their packages between all the available options. Both way transfer should be allowed. To change into one package will re-enable the user to get back to his previous one.

CHAPTER IV

A SOFTWARE TO HELP THE CONSUMER IN CHOOSING A PACKAGE

4.1 Introduction

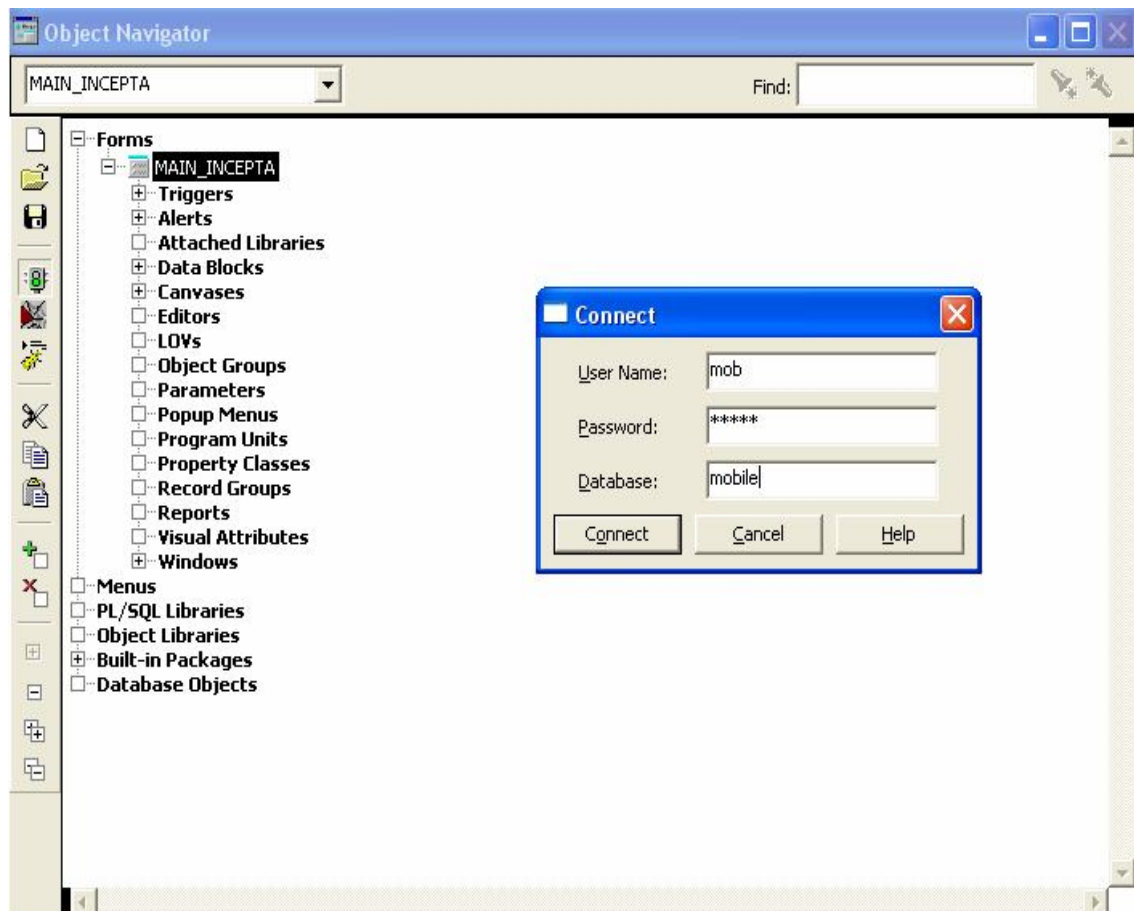
Telecommunication at present is at the zenith of industrial success. Communication for business or for the pleasure chat among the youth, mobile companies have grabbed the major Grid of economy. The term “mobile” is now as popular a term among the business Industries for their enormous profits, or among the youth for their popular gossip or as it is even among the children as an object of tremendous interest loaded with various video and gaming facilities.

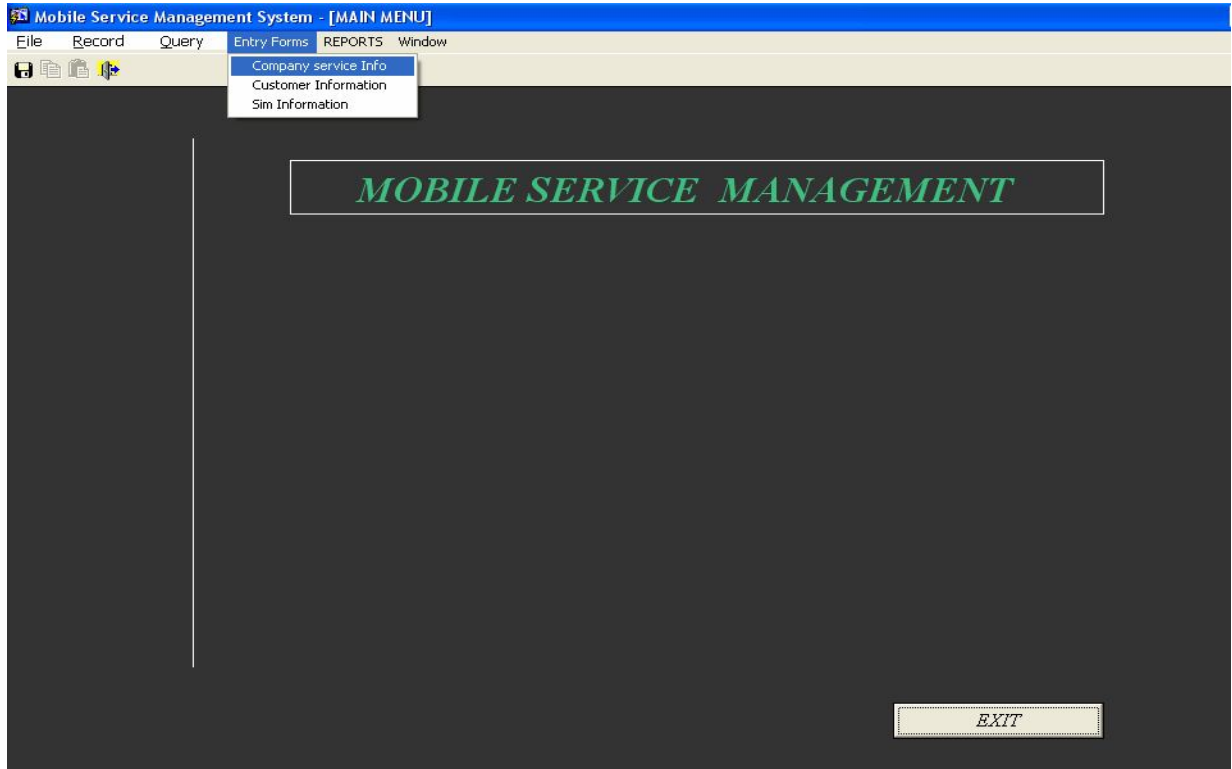
But in the swim of their money making tendency, they are playing ridiculous games with the clients. Considering the demand of mobile communication, mobile companies have offered special packages at different rates. On the face of manifold offers, people are easily hoaxed and can be allured by a wrong package for his requirement. The basic objective of our “Mobile Service Management” is to serve the appropriate choice for the clients.

Remarkably, the margin of mobile facilities does not confine to talking. Now versatile operations and information have been zipped into a network. A student can see his result, a business person can watch the flip flop of share market, a banker can check his balance and what not. The latest edition of mobile service is internet access. Regardless of call rates, a client must look into all these incentives to choose the most beneficial service for him. A student should go for the economy package while a businessman should go for the most communicative and accessorized package.

Our software holds the detailed database of every separate package or service of every mobile company. In proportion to the call rate and economic status of a user, the software will make its suggestion for the user or the user himself can study the details to choose his own package. If the software is introduced to the users, they will be better aware of his requirement so also they can utilize their mobiles properly and establish nationwide communication smoothly.

4.2 Forms Description





The software has been developed on the platform of oracle developer 2000. The above figure illustrates the main interface. The welcome screen appears clicking on the MSM.exe file. Initially it prompts for a user name and password. A successful log in will open the above screen. The interface has six primary tabs each constituted with several options. The main menu leads either way to form or report. The user has to switch to any tab or option from the main menu.

SERVICE INFORMATION FORM

COMPANY INFORMATION

Company Name: Grameen Phone
Service ID: 000000000000003
Entry Dt: 04-MAY-2006
Comment: NO COMMENT
User: MOB

SERVICE DETAIL

DTL ID	Service Type	Package Type	Date	From	To	Charge Money [per munite]	Comment
3	PRE PAID	gold	04-MAY-2006	3	8	3	NO COMMENT
3	PRE PAID	gold	04-MAY-2006	10	15	2	NO COMMENT

SAVE RESET ADD EXIT

The Service info form bears a comprehensive database of every particular scheme announced by a mobile company. The software operator will upload all the detailed information on this form. The software is designed to auto generate a unique service id which acts as the primary key in the database for service identification. Against the id, the software will beset particular information on the form. The software is coded to read the system clock and set the date and time, each time database is updated.

USER INFORMATION FORM

MOBILE SERVICE MANAGEMENT SERVICE

USER INFORMATION / UGASE ENTRY FORM

USER INFORMATION

User Name: Sadi
User ID: 0000000001
Mobile Number: 0189438999
Address: Uttora
Land Phone No: 7345690
E Mail:
User Company:
GO DETAIL

User Id	Service Id	Service Type	Package Type	From Time	To Time
0000000001	0000000000000001	post_paid	mobileplus	4	7

User Dtl Id: 1

SAVE **ADD** **RESET** **EXIT**

The user information form depicts the detailed data base of the user. It manipulates the user's mobile usage information to connects to the "Service Information Table". The form automatically assigns a user id and collects his personal information. On filling in the service id box, the user can check all the ids assigned for the particular services by pressing F9. The service id will inherit all the attributes of the concerned mobile company from the service information table.

The important feature of the form is that it notes the favorite talking slot of the user. This pick of data finally matches the service info table to search for the suitable package for him.

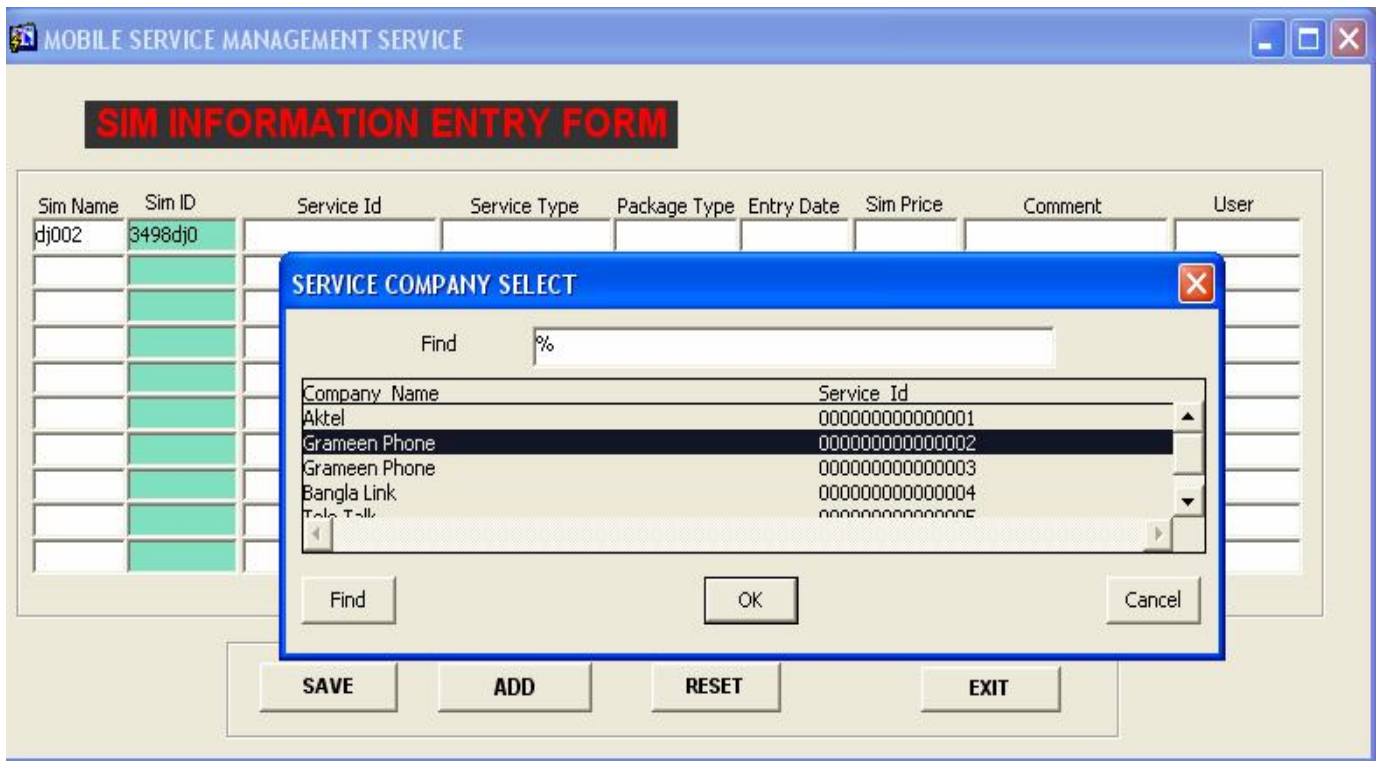
All the information in this form are editable or updatable. A registered user can change his information on his account and save it into the database. Every time he changes his details , he can receive a new suggestion for the best suitable package for his use in the report.

SIM INFORMATION

Sim Name	Sim ID	Service Id	Service Type	Package Type	Entry Date	Sim Price	Comment	User
dj01	1102dj02	0000000000000002	pre_paid	mtom	17-MAY-2001	300	NO COMMENT	MOB

SAVE ADD RESET EXIT

The “SIM INFORMATION TABLE” hoards the information of the SIM. This table is maintained by a software operator. It modules SIM identification along with all the related information with regards to its package, type , date of release and so fourth. “Service id, Service type, Service name”, these three fields interact with the service information table. The date of entry is automatically read and entered from the system clock. It accumulates all the SIM card ids as a result of which the number of SIM’s available in a package is patched.



Pressing F9 on any of the fields will reveal a dialogue box. It will display the attributes of the field from the service information table. The operator will be notified of the database of the field. For example, pressing F9 on the service id field, the user will see the list of service ids assigned for particular companies and be able to choose the corresponding service id for the service. In the same way, "service type", "package type" fields are filled in.

The form adds a field "SIM price" which writes the price of the SIM. This entry assists the reckon of the suggested SIM. As an economic factor is strongly connected between the call tariff and the price of the SIM. It includes another field comments. It bears any comment or remark on the package.

The final field contains the signature of the operating user. The operator types his name in the field. In this way, job distribution will be easily divisible among the employees.

3.3 Reports

The screenshot shows a software window titled "USER_SERVICE: Runtime Parameter Form". The window has a standard menu bar with "File", "Edit", "View", and "Help". Below the menu bar is a toolbar with icons for file operations (cut, copy, paste) and a help icon. The main content area is titled "Report Parameters" and contains the instruction "Enter values for the parameters". There are four dropdown menus for parameter selection:

Parameter Name	Value
Service Id	0000000000000001
Service Type	pre_paid
Package Type	mobileplus
User Id	0000000001

The above parameters determine the report of the software. First 3 parameters are derived from the service information table and the last parameter is derived from the user information table. From the first three parameters, the software internally inherits the property or attributes of his desirable package. As

per the tariff, the software automatically reads and calculates call charges followed by 24 hour units. Then from the fourth parameter, it identifies the service being used under the user id and calculates in the same method. The comparison outputs two numerical digits which makes the decision as to which package is suitable for the user. The least expensive package will be suggested for him in the following screen.

ALL_COMPANY: Previewer

File View Help

Page: 1

Report run on: May 4, 2006 12:22 PM

Service Id	Service Type	Package Type	Total
0000000000000002	post_paid	mtom	480
0000000000000001	post_paid	mobileplus	2880

Company Confidential

Report for a new user

The screenshot shows a software interface titled "ALL_COMPANY: Previewer". The main content area displays a report titled "ALL COMPANY COST" with a subtitle "Report run on: May 4, 2006 12:57 PM". Below the title is a table with the following data:

Service Id	Service Type	Package Type	Total
000000000000002	post_paid	mtom	480
000000000000004	pre_paid	Standard	1200
000000000000003	pre_paid	gold	1500
000000000000001	post_paid	mobileplus	2880
000000000000005	pre_paid	Standard	3168

A large, diagonal watermark reading "Company Confidential" is overlaid on the bottom half of the report.

If a user does not have a mobile and wants to buy a scheme for the first time, he is shown the detailed rates according to tariff. When he is prompted for his pick hour for talking , the software converts the tariff into 24 hour unit and make a calculation. Then it shows the corresponding values for all the five mobile companies and helps him study which is best for him.

REFERENCES

http://www.dailytimes.com.pk/default.asp?page=story_7-9-2004_pg5_1
<http://www.grameenphone.com/modules.php?name=Content&pa=showpage&pid=40:55:2>
<http://www.apnic.net/mailling-lists/s-asia-it/archive/2002/07/msg00024.html>
<http://www.smpke.jpm.my>
<http://www.btrc.org.bd/>
<http://www.dailytimes.com.pk/default.asp>
<http://www.bangladeshinfo.com/index.php>
<http://www.3g.co.uk/PR/December2004/8802.htm>
<http://www.dawn.com/2004/05/02/nat.htm>
<http://www.teletalk.com.bd/>
<http://www.hinduonnet.com/thehindu/mag/index.htm>
<http://www.citycell.com/>
<http://www.banglalinkgsm.com/>
<http://www.aktel.com/>
<http://www.bttb.net/>
http://en.wikipedia.org/wiki/Mobile_phone_spam
http://topics.nytimes.com/top/reference/timestopics/subjects/c/consumer_protection/index.html?ofset=20&query=LEAD&field=des&match=exact
http://www.gsmworld.com/news/press_2006/press06_27.shtml