

An Overview of VoIP Industry with a focus on REVE System

Internship Report

An Overview of VoIP Industry with a focus on REVE System

Submitted To:

Ms. Syeda Shaherbanu Shahbazi Ahmed
Course Instructor
Brac Business School
Brac University

Submitted By:

S. M. Rasel Akram

ID: 13164020
Department: MBA
Brac Business School

Letter of transmittal

September 17, 2015

Ms. Syeda Shaherbanu Shahbazi Ahmed

Course Instructor
Brac Business School
Brac University

Subject: Submission of internship report on “*An Overview of VoIP Industry with a focus on REVE System*”

Dear Madam,

It is a great pleasure for me to submit the report on “*An Overview of VoIP Industry with a focus on REVE System*”. I am submitting this report as my internship report.

This report will help to find out what is the usage of VoIP, current situation of using VoIP, how the companies are utilizing this technology. In every spare of my thesis I tried my best to make good combination of my past course and practical experience.

It is true that it could have been done in better way if there would not be the limitations. I hope you will assess my report considering the limitations of the study. Your kind advice will encourage me to do further research in future.

Thank you.

Sincerely yours,

S.M. Rasel Akram

ID: 13164020
Brac Business School
Brac University

Acknowledgement

First of all I am grateful to almighty Allah without whose grace it would not possible for me to prepare this internship report.

I am deeply indebted to my supervisor, **Ms. Syeda Shaherbanu Shahbazi Ahmed**, instructor of this internship program. I would like to express my gratitude to him for providing me detailed feedback and advice on this report. He always gave me his suggestions in making this study as flawless as possible.

In the preparation and finishing this report, I acknowledge the encouragement and assistance given by a number of people and institution, especially Mr. Khan Hasan Saiful who was my on-site supervisor. I am also grateful to my parents who inspired me all along the way.

Special thanks go to the respondents, who spared their time generously, and helped me a lot finishing this report.

Executive summary

Communication is the biggest part of the service industry now-a-days. Since the very beginning of the service people are always trying to provide the fastest service among the industry. As like E-mail has replaced the traditional telephony industry, IP communication has taken over a huge part of the regular telephony service. VoIP has grown as the biggest player in the Voices-based industry.

The biggest drawback for VoIP industry is the lacking of the proper government Policy about VoIP service. That has ended up with a very bad reputation of the VoIP industry and making the term “VoIP” very controversial. However, VoIP is one of the most important segments of Service industry now. By overcoming all barriers, there are several VoIP based company is working in Bangladesh now.

REVE System is a software developer company who provides all kind of software solution for the VoIP business. Competing with other modern software, REVE System has stepped into 76 countries around the world. REVE System has established a new vision for the Internet based business since 2003. After winning several major awards worldwide, they are getting towards the Fortune 500 Company.

Chapter 1: Overview of REVE Systems

1.1 Overview:

REVE Systems started in 2003 with a focused approach to serve the IP based communication industry. An ISO 9001:2000 certified Telecommunication & Software solution provider. REVE Systems has a wide assortment of products, ranging from backbone infrastructure to peripheral products, including middleware. The company today holds a leadership position in Mobile VoIP, Soft switch & Billing and Bandwidth Optimization solutions.

REVE Systems ensures the best returns on technology investments and strengthens the service providers' market presence by providing them with best-in-class VoIP solutions. A large team of experienced and well trained engineers help to provide 24x7 Platinum Level Support to its clients and to ensure that their services are always available to their end customers.

REVE Systems is a Symbian foundation member, part of the iPhone developer community and Nokia developer forum. These provide it the first hand access to industry developments and help it to bring new products at the right time. The company makes decent investment in R&D activities to ensure technological efficiency for now and for the days ahead.

1.2 Vision:

The Mission of REVE System is to become a fortune 500 company.

1.3 Mission:

The Mission of REVE system is to provide IP based communication easily to the people.

1.4 The Concentration:

From the very beginning it attracts customer by providing quality of service with an excellent product iTel Mobile Dialer. Gradually it increases popularity in the market by updating the product mechanism as the operation of that product is hindered by different internet service provider in different countries in the world. This was possible because it has one of the most innovative R&D team among the world. And REVE system claims to have resource and they can overcome any difficulties very quickly. Their soft switch which is named “iTelSwitchPlus” is now becoming the market leader. The fastest call connectivity attracts the customer to use iTelSwitchPlus and they are leaving another popular switch “VoIP Soft switch” day by day. And they also have a strong technical team to provide customer service 24X7. REVE Systems ensure quality of service for each customer as they have a training department to make sure that each engineer can provide good service. A very good Sales team is working dedicatedly in regional basis. A strong marketing team is promoting the product in the market. Product development

team (Dialer and switch) is working for new features along with product quality. So, REVE System can give a fastest and full VoIP solution and they are now the market leader for VoIP.

1.5 Products:

List of some Products:

Dialer Based:

- iTel Mobile Dialer
- iTel PC Dialer
- iTel Mobile Callback Dialer
- iTel Mobile Call through Dialer
- iTel Hybrid Dialer

Switch Based:

- iTelSwitchPlus
- iTelBilling
- iTel SBC

Bandwidth Optimization:

- Byte Saver

1.5.1 Mobile Dialer:

iTel Mobile Dialer Express is a mobile application, which allows users to make VoIP calls from mobile phones. This mobile application has been designed keeping VoIP service providers requirements in mind.

iTel Mobile Dialer Express not only lets your clients make VoIP calls from their mobile phones by using your VoIP service, but will also let you do the branding of your service. Being a service provider, you can run this software under your own brand name.

With the mass deployment of GPRS/3G/4G/Wi-Fi networks and with the introduction of cheap data services, calling from mobile sets using the VoIP technology is getting popular. Hence, iTel Mobile Dialer Express provides an opportunity to service providers to earn good amount of revenue by enabling them to offer VoIP services.

1.5.2 iTel Switch:

REVE Systems offers a comprehensive and dynamic carrier grade solution through its most significant innovation iTel Switch Plus. iTel Switch Plus is one of the most popular and market leader soft switch brand for the global retail and wholesale platform. iTel Switch Plus ensures most reliable and cost effective solution that can help entrepreneurs grow as a giant global carrier in VoIP industry. Multi-level reseller support, easy end user interface, integrated billing, and class 4 &5 soft switch features are some of the core competencies of iTel Switch Plus.

Additionally, this soft switch has other important attributes such as reporting and monitoring tools, enhanced multi-tier security, distributed architecture, supporting multi-model origination devices and termination options. Due to these features, iTel Switch Plus becomes an ideal platform for all the ITSP's who want to provide services to retail consumers for their customer needs. The iTel Switch Plus platform has been designed to meet the highest needs of carriers with multiple termination routes and has enough versatility to be used for traffic origination across calling card, call shop, IP devices, PC softphones (also called PC2Phone), DID's and mobile VoIP applications.

1.5.3: iTel Byte Saver:

iTel Byte Saver is a server side software, which helps VoIP service providers offer their services in those geographies where VoIP calls are blocked by firewalls. Another advantage of this software is that it reduces bandwidth consumption by up to 70% at the originating end.

Due to its efficient tunneling technology, iTel Byte Saver allows all calls made from iTel Mobile Dialer Express to pass through any internet firewall or blockage. This means that in the areas where a SIP protocol or other voice protocols are blocked, it establishes a tunnel between itself and iTel Mobile Dialer Express in order to bypass the firewall or blockage.

This software helps end users to make smooth calls from their SIP dialer even if the bandwidth is low in their mobile/data networks. Less bandwidth consumption also helps end users cut their data cost by a significant amount. Generally a VoIP call made from iTel Mobile Dialer Express on G.729 codec consumes 25 kbps; however in conjunction with this software, the bandwidth consumption can be reduced to as low as 9.6 kbps.

It also provides NAT support to iTel Mobile Dialer Express thus preventing one way voice problem. This software works efficiently in between the VoIP mobile client and service provider's soft switch. Calls travel from the mobile client to iTel Byte Saver and by using its efficient tunneling technology, the bandwidth optimizing software passes the calls to the mobile VoIP service provider's soft switch. The call gets registered and authenticated directly by service provider's SIP Switch.

1.6 Achievement:

The achievements of REVE Systems are:

- INTERNET TELEPHONY Excellence Award for Exceptional IP Communications Solutions
- REVE Systems wins Red Herring's Top 100 Global Award for 2012
- REVE Systems wins Red Herring's Top 100 Asia Award for 2012
- NGN Leadership Award for being a Global Technology Leader
- Unified Communications Excellence Award for Outstanding Innovation
- INTERNET TELEPHONY Excellence Award for Exceptional IP Communications Solutions
- iTel Byte Saver has received 2010 Communications Solutions "Product of The Year" Award
- iTel Mobile Dialer Express has received IP Telephony-2010 Excellence Award
- For Bringing Innovations to IP Industry

1.7 SWOT Analysis:

<p>Strength:</p> <ul style="list-style-type: none"> • One of the best solution provider is the market • Excellent team of Software developers • Have a strong Brand Value 	<p>Weakness:</p> <ul style="list-style-type: none"> • Slow adoption to the new communication software •
<p>Opportunity:</p> <ul style="list-style-type: none"> • Huge growing market for VoIP around the world. • Huge market for Contact Centers • According to current government plan of Digitization the internal information is soon going to be IP Based. 	<p>Threats:</p> <ul style="list-style-type: none"> • Free Software like Viber and WhatsApp is capturing the market so quickly.

1.8 Target Customer:

The target customer for this company is given below:

- **VoIP Businessman:** The main focus of the company is the VoIP businessman around the world. The business is now having grown so huge that it is estimated that in 2016, the net profit from VoIP industry has will be 10 billion USD. This means there is still space for at least 10,000 major VoIP service providers. The primary focus of REVE System is that businessman.
- **Call Centers and Customer service:** One of the major parts of VoIP is call centers. There can be 2 types of call center activity. One is inbound, which means client will call to hotline for query or help. Another is outbound, where call center agent make calls to the customer to share information or to sell products. Both of this is required VoIP platform if they want efficient service in minimum cost.
- **Government:** Government is now becoming more dependable on IP communication. They have launched many IT based programs in which they have focused on VoIP.

1.9 Current Giant Customer:

The Current Giant Customers are:

- Network Exchange Technology
- Iptogo, USA
- Mox Telecom, Germany
- Net2Phone, USA
- Sippysoft, Canada
- QiiQ Communications, Canada
- Zamir Telecom, UK
- Talkfree, USA
- Zylog Systems, India
- iWorld Services, USA
- Local Telecom
- DSG Technology, Taiwan

1.10 Regular Clients

We are providing our VoIP solution to our client outside Bangladesh. Major VoIP market in Middle East countries (For example: UAE, KSA, Oman, Qatar, Lebanon, Jordan etc) as huge migrant peoples (Maximum peoples from south Asia) are living there and they actually make

VoIP calls. The clients from other countries like USA, UK, South Africa, India, Pakistan, Turkey, Thailand, Singapore etc.

Chapter 2: The Job

2.1 Job Responsibility:

As an IT based industry, the company heavily depends on the in time product delivery and providing solution on the right time. The biggest portion of the HR is IT-Based personnel. After that the crucial roles played by the commercial division which includes – Sales, Business Development, Marketing Operation.

In this firm I was working in the Sales Department. The specific job responsibilities are given below:

- Create Client Database on different criteria
- Maintain contact with the client
- Collect feedback both from client and field engineer
- Generate new Leads

2.2 Different Aspect of Job performance:

2.2.1: Key Performance Indicator

The performance is measured some aspects that are given below:

- For the team:
 - Yearly Sales
 - Other task assigned by the management

- For Individual:
 - Total volume of sales
 - Total Client contracted
 - Total Lead Generated
 - Other task assigned by the manager.

2.3 Recommendation:

A few recommendations for the company:

- Develop a HR department in the organization.
- Develop a strong payroll policy and include some benefit like Health insurance, Provided fund
- Dedicated training team is required for the non-technical employee.

Chapter 3: Overview of the Report

3.1 Background of the report:

As a mandatory part of MBA program all the students have to undergo an internship program of three months duration in any organization with a view to acquiring practical knowledge. Theoretical Knowledge is not enough for a business student. There is a gap between the theoretical knowledge and practical knowledge. Our internship program has been launched mainly to bridge the gap. REVE System is the market leader in their business area. The company offers students the perfect opportunity to gain on-the-job experience by supporting and guiding them during their internship program in many business areas. After all they know that today's students can be tomorrow's most efficient employees. Through internship students become aware of organizational culture and learn how to show professional excellence to a great extent. This learning helps them when they finally enter into practical field.

3.2 Statement of the problem:

In the context of Bangladesh VoIP is a very fast growing business. But VoIP is a very controversial term in Bangladesh. In this report, I will try to find out the Technical, legal and Business aspects of VoIP Business.

3.3 Objective of the study:

In this study I have chosen perception towards current situation of using VoIP in Bangladesh as my report topic. I have collected the information related to the topic through the records and personal interview. As a student of MBA, I was encouraged to find the similarities between my learning and real world situation. So, this can also be considered as the objective of the paper in a broader sense.

The main objectives are given as follows:

1. To find out current situation of VoIP solutions in Bangladesh
2. To find out business opportunity of VoIP Business

3.4 Methodology of the study:

Data are gathered from both primary and secondary sources. As REVE Systems, is leading company for VoIP solution and they want the people know about the company, so I got sufficient data to prepare my report. The details of these sources are highlighted below.

Primary Sources

I have collected data from primary sources. I went through some interview and others from my job experience and training. The sources are:

1. The IT managers
2. Interviewing of REVE System's staff
3. The Sales Data

Secondary Sources

I also collected some information regarding international perspective from

- a. Company Documents
- b. Newspaper
- c. REVE System websites
- d. BASIS Website
- e. Online Journals

3.5 Limitation of the study:

There were some limitations in gathering some information for this report.

- The main limitation I faced in preparing this report was obstacles in finding information
- Lack of sufficient information (both primary and secondary data), as this topic is considered as very much confidential topic for the organization.
- Lack of awareness among the people.
- Limitation of time to collect data.

Chapter 4: Technical aspects VoIP Industry

4.1 VoIP:

Voice over Internet Protocol is a group of technologies for transmitting voice and multimedia over internet. Internet telephony refers to the communication services like voice, fax, SMS, and voice messaging over internet.

4.2 SIP

The Session Initiation Protocol is a signaling communications protocol, widely used for controlling multimedia communication sessions such as voice and video calls over Internet Protocol (IP) networks.

The protocol defines the messages that are sent between peers which govern establishment, termination, and other essential elements of a call. SIP can be used for creating, modifying and terminating two-party (unicast) or multiparty (multicast) sessions consisting of one or several media streams. Other SIP applications include video conferencing, streaming multimedia distribution, instant messaging, presence information, file transfer, fax over IP.

4.3 Benefits:

In point-of-sale management, the use of VoIP can provide up-to-date information on aspects of the business, For example:

- Cheap communication to anywhere in the world
- More efficient solution for Contact Center
- Call made through internet, so wide range of device choice.
- No need of GSM Network.

4.4 Disadvantages of VoIP:

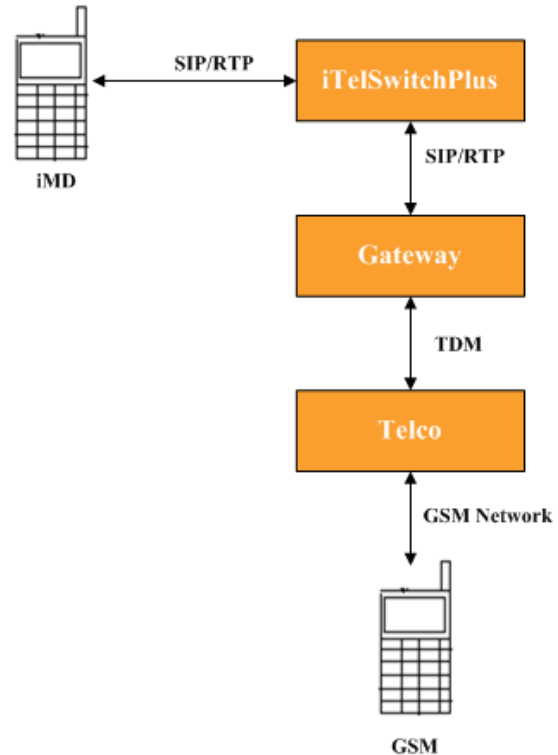
There are few disadvantages of VoIP business. These are:

- Long-term benefits and risks are not yet known. These risks include unknown service life of hardware and infrastructure, and details surrounding reliability and quality.

- The factors that affect the sound quality during transmission include latency (or delay), jitter, and packet loss.

4.5 How to generate VoIP Call:

The above picture depicts a VoIP call scenario where a SIP user agent (iTel Mobile Dialer) calling to a mobile and his call first goes to his own SIP switch. SIP switch will authenticate this call and if sip account has sufficient balance then it will terminate this call to a gateway. Gateway then forwards this call to the mobile operator.



4.6 The requirement for VoIP startup:

If anyone wants to start their own VoIP these are the software required for VoIP:

- Dialer
- Soft switch
- High performance server to keep the Soft switch
- Route for the call

Chapter 5: Overview of VoIP usage in Bangladesh

5.1 Business Opportunity:

Business Opportunity Traditionally, the telecom sector has been one of the most lucrative market segments in both emerging and developed economies. But also traditionally, that sector has been protected by heavy local regulation. Nowadays, however, many countries have either started or are considering deregulation of their telecom sectors. Such strong trend towards liberalization of the sector, coupled with the emergence of new technologies for cost effective transport of voice data, and namely Voice-over-IP, opens up new revenue generating opportunities for entrepreneurs all over the world. The calling cards business model offers a relatively low cost entry into the lucrative telecom market segment. The essence of the calling cards business model is to creatively segment customers by various demographic and/or behavioral characteristics and to design calling cards offerings to meet their specific calling needs. The calling cards business typically attracts entrepreneurs who want to enter the VoIP market, businesses with established retail distribution channels, and service providers who want to diversify their revenue streams.

5.2 Legal Aspects of VoIP:

One of the burning questions is how legal is VoIP business in our Bangladesh. According to the law of Bangladesh Telecommunication Regulatory Commission, if the call pass through a legal International Gateway (IGW) then Government get the revenue from it, then it's legal. But if the call passes through illegal IGW then this is illegal VoIP. The legal connection is called white connection and the illegal connection is called Grey Connection.

Government call auctions for IGW in Bangladesh. So, if anyone wants to get license they need to submit the proper document in response to the Auction. Then Government checks the document, the technical ability of the firm and the price quotation, finally they release the result of the Auctions

To liberalize and legalize VoIP, the government formulated "International Long Distance Telecommunication Services (ILDTS) Policy 2007" and delegated this to the Commission for implementation. As suggested in the ILDTS policy, BTRC has successfully issued three IGW Licenses. These are:

- Novotel Limited

- Bangla Trac Communications Ltd.
- Mir Telecom

Later on, in 2012 more 21 companies were given IGW license. These are:

- Bestec Telecom Limited
- Hamid Sourcing Limited
- Venus Telecom Limited
- Digicon Telecommunication Limited
- Bangladesh International Gateway Limited
- Vision Tel Limited
- Platinum Communications Limited
- SM Communication Limited
- Bangla Tel Limited
- Ranks Telecom Limited
- Cel Telecom Limited
- Mos5 Tel Limited
- Ratul Telecom Limited
- Kay Telecommunications Limited
- First Communications Limited
- Apple GlobalTel Communications Ltd.
- DBL Telecom Limited
- Telex Limited
- Sigma Engineers Limited
- Unique Infoway Limited
- Global Voice Telecom Limited

5.3: Major Player in Bangladesh:

There are some major players are playing role in Bangladesh VoIP industry. These are:

NovoTel: NovoTel Limited is a leading International Voice Gateway (IGW) operator in Bangladesh. NovoTel started its operation in 2008 and since then it has been working with the international telecom carriers including Tier-1 operators from across the Globe. NovoTel has successfully been handling international incoming and outgoing voice traffic for Bangladesh

over its international telecom network. NovoTel has a state of the art 24/7 NOC which is maintaining excellent service quality and uptime for its local and international interconnected telecom partners. NovoTel has developed expertise in three core areas of telecommunication such as IP Network, Transmission Network and Core Voice Switching network.

Genuity Systems Ltd.: It is an IT company established in the year 2003 in Dhaka, Bangladesh. It has by now established itself as one of the prestigious entities providing IT and telecommunications related services not only in Bangladesh but also in overseas countries.

Genuity provided services include but not limited to Contact Center solutions, VoIP soft-switch and billing solutions (for overseas markets), Mobile Dialer solutions, IVR solutions, IP-PBX solutions and advance IT training. Within a short time we have developed a substantial client base in Bangladesh as well as abroad. This was possible due to fast delivery and uncompromising quality and reliability of our services, thanks to our highly skilled, knowledgeable and motivated workforce.

REVE System: REVE System is the largest software developer for VoIP in Bangladesh.

5.4 Opportunities of VoIP in Bangladesh

VoIP industry is outpacing the growth in traditional voice industry, as more people are switching to VoIP as the platform when they do international, cross border communication. With the advent of multiple services on the IP platform like Instant Messaging, SMS, Voice calls, Mobile Top Up, Value added services (VAS), consumers and enterprises prefer to do their communication over IP platforms. This is leading to fantastic growth opportunities in the industry and opportunities for more players in the VoIP industry to support the increasing population of users.

Mobile VoIP has over the past few years fuelled adoption of VoIP, with growth of smart phone penetration, more availability of affordable data options(3G) from mobile operators, changing communication habits (Instant messaging, SMS getting equally popular as voice) and a globalized world, leading to more demand for cross border communication. We present you a brief on the varieties available in the VoIP industry and how can one plan to be a part of this industry, even if they have no prior information or experience.

- **Globalization:** Now as the business is globalized, we need to communicate more with other countries. VoIP gives us lower rate to communicate anywhere in the world.
- **Growth Opportunities of Call Centers:** Call center industry is growing faster day by day. VoIP has a golden opportunity with the industry.

- Increased Speed of Internet: Now in Bangladesh, the speed of internet has increased drastically. As a result this is more convenient to talk over IP for a very cheap rate.

Chapter 7: Recommendation and conclusion

7.1 Recommendation:

There some recommendation that I would like to mention:

- Government should make a proper policy for VoIP in Bangladesh
- Government needs to raise awareness among so that they do not use illegal connection of VoIP
- Government should make the legal VoIP business easier so that people do not need to use illegal connection for the sake of simplicity.
- Government needs to give some incentives to the industry because it brings a lot of foreign currency into Bangladesh.
- There are several Major VoIP solution provider in the world are now head quartered in Bangladesh, they can make an association in order to get benefit from the authority.
- The media should publish the unexplored opportunity of this industry so that this can help to increase the acceptability of VoIP.

7.2 Conclusion:

To keep up the pace with the current world scenario, Bangladesh needs to make a proper compliance for VoIP and make this unveiled opportunity in Public. It will help the consumers to use cost effective communication and also create a huge employment opportunity to the people.

References:

1. REVE Soft Website
2. International Long Distance Telecommunication Services (ILDTS) Policy 2007
3. International Long Distance Telecommunication Services (ILDTS) Policy 2012
4. BTRC website