

LETTER OF TRANSMITTAL

July 6, 2014

Md. Rezaur Razzak

Professor

BRAC University,

Dhaka, Bangladesh.

Subject: Submission of Internship Report

Dear Sir,

It gives me enormous pleasure to submit the internship report on “**An analysis of “Client Support procedure” in ADN Telecom Communication Ltd** as per the Supervisor’s instruction. I expect this report to be informative as well as comprehensive which was assigned to me as a partial requirement for the completion of the MBA Program. I am very much grateful to our Almighty God because he gave me an opportunity to complete my internship program smoothly. I have tried to combine the secondary data available with my own investigation in order to come up with a complete report.

In spite of several constraints and with my limited knowledge, I have tried my level best to prepare the report worthwhile. Your acceptance and appreciation would surely inspire me. For any further explanations about the report, I will be gladly available to clarify the ins and outs.

Thank you again for valuable direction and cooperation.

Sincerely yours,

.....

Shourabh kar

MBA

ID No- 11164078

BRAC University.

Declaration

I am **Shourabh kar**, the undersigned student; hereby declare that the piece of work has been prepared by me, under the guidance of **Md. Rezaur Razzak** Professor, as a requirement for the accomplishment of MBA degree.

It is declared that this report has been prepared only for academic purpose. It is also declared that this report is not being copied from elsewhere and it has not been submitted or it will not be submitted elsewhere for any other purpose.

Shourabh kar

ID: 11164078

BRAC University,

Dhaka, Bangladesh.

Supervisor's Certification

I do hereby declare that the research works embodied in this report entitled, “An analysis of Client Support procedure” in ADN Telecom Communication Ltd are the outcome of original works carried out by **Shourabh kar** under my supervision. I further certify that the internship report meets the requirements and standard for the degree of Master of Business Administration in Marketing.

(Professor Md. Rezaur Razzak)

Supervisor

BRAC University,

Dhaka, Bangladesh.

Acknowledgment

I have completed my internship in An analysis of “Client Support procedure” in ADN Telecom Communication Ltd. My internship report won't be possible without contribution of few people.

I would like to thank my supervisor of the internship program Md. Rezaur Razzak , Professor, BRAC University for his guidance, constant and spontaneous support, efficient supervision and constructive suggestions. Without his help this report could not have been a comprehensive one.

I would also like to express my humble gratitude to my organizational supervisor, Md. Ashfaqul Alam Emon, Manager, Communication Division; Mr A.M. Shahidullah, Manager, Corporate Sales; Mr.Nafi Sagor, Coordinator, Technical Support Dept. Their guidance, advice and cooperation allowed me to complete this report successfully.

I can't thank enough to all the team members of communication division of ADN Telecom. They have truly been extremely supportive to me. They have helped me in every case whenever I have asked for. Throughout time they were never impatience. They did not allow me to feel uncomfortable for even a single moment. I am really grateful to all for their supportive and friendly behavior.

Last but not least I also acknowledge my family and friends for their support and encouragement throughout my internship period and also while preparing this report.

Executive Summary

The world around us is changing faster than ever. To stay ahead of the frantic pace of this changing, digital world, companies are looking for robust communication infrastructure, efficient and cost effective software solutions, and new technologies and devices that would give them an edge. Automate the processes, streamline the operations, spending time not trouble-shooting but strategic thinking and make it efficient.

The right service provider can offer all these at a one stop shop and ADN Telecom stands out of the crowd for its understanding off the client's requirements and knowing what technology would work best to fulfill these requirements. ADN Telecom Communication Ltd is proud to introduce Next Generation Networking (NGN) in Bangladesh. The general idea behind NGN is that one network transports all information and services (internet, data, video, etc.) by encapsulating these into packets and that should be fully QoS enabled. It is focused on providing a carrier grade solution to the telecommunication service provider and taking the quality of service to a new class.

In ADN Telecom Communication Ltd client support is handled by communication department combination of different support team.

The following literature is relevant to this report as it helps to better understand the different types technical service provided to client and how the support procedures pursue.

I analyzed the data and finally came to a conclusion with some recommendations to the Bank. The data were analyzed on the basis of the parameters and discussed to reach a conclusion.

Contents	Page No.
Letter of Transmittal	i
Declaration	ii
Supervisor's certificate	iii
Acknowledgement	iv
Executive summary	v
Chapter 1: Introduction	
1.1. Origin of the Report	01
1.2. Rational of the Study	01
1.3. Objectives and Scope of the Study	02
1.4. Methodology of the Study	02
1.5. Limitations of the Study	02
Chapter 2: Literature Review	
2.1. Client Service at ADN Telecom ltd	03
2.2. Managing Service Quality	03
2.2.1. Gap between consumer Expectation and Management Perception	04
2.2.2. Gap between Management Perception and Service Quality Specification	04
2.2.3. Gap between Service Quality Specification and Service Delivery	04
2.2.4. Gap between Service Delivery and External Communication	04
2.2.5. Gap between Perceived Service and Expected Service	04
Chapter 3: The Profile of ADN Telecom Ltd	
3.1 A Brief History of ADN Telecom Communication	05
3.2. Vision & Philosophy	06
3.3. ADN Telecom Strategies	07
3.4. Organizational hierarchy chart	08
3.5. ADN Telecom Technical Team: Roles & responsibilities	09
3.6. Field of operations	10
3.7. Branch Network	11
3.8. Network Coverage Area	11
3.9. Types of Client	13
3.10. Monitoring software and its usages	13
Chapter 4: Customer Service at ADN Telecom Ltd	
4.1. Communication	13
4.2. Corporate -Class internet bandwidth	14
4.3. Email Services of ADN Telecom (powered by google):	15
4.4. IP/MPLS (Multi protocol Label Switching):	16
4.5. IPLC (international Private Leased Circuit):	17
4.6. TDM Solutions	18
4.7. Dark Fiber	19
4.8. Business Intelligence: software & Application Development:	20
4.9. Website Design & Hosting:	21
4.10. MAP Work	22
4.11. Automation	23

Chapter 5: Findings and Analysis	
5.0. Client Support procedure at ADN Telecom Communication Ltd:	24
5.1. The ADN Telecom Approach: Analysis	24
5.2 ADN Telecom Support:	25
5.3 Technical Problem: Flow of a Technical complains handling processes:	26
5.4 Technical Support Team	29
5.4.1 Help Desk:	29
5.4.2 Monitoring Team (24/7)	31
5.4.3 Field Support:	32
5.5 Service Escalation Process	36
5.6 Findings of the Study: SWOT Analysis	36
Chapter 6: Recommendations and Conclusion	
6.1 Recommendations	38
6.2 Conclusion	39
Reference	40
Appendix	41

1.1 Introduction

As a part of my MBA program, I have prepared my research report on ADN Telecom Ltd a Next Generation Networking (NGN) in Bangladesh which is my current working place also. I am working here in communication division under technical department. It's a renowned network solution provider company in Bangladesh which offers network solution for different corporate organizations like BANKs, ISP, PSTN, and Social Organization and so on. I had prepared a report concentrating on this department. The report will focus on the technical support procedure and it will reveal the background of the company, description of the procedures, findings of the study and recommendations based on the experience gathered.

1.2 RATIONALE OF THE STUDY -

Internship program is the practical aspect of our theoretical learning. It makes a bridge between the gap of classroom learning and practical learning. In this view, Internship plays an important role for each professional degree especially like MBA. The study will help formulate suitable policies taking into consideration different ideas, suggestions and feelings of the clients. Furthermore, it may note that ADN Telecom Ltd employees who are really executing the policies undertaken by the top management will have a chance to communicate their interaction and provide necessary feedback. Because of some mismanagement of the technical support system day by day the rate of response time and down time is increasing and as a result its clients are becoming less satisfied and depress. In this crucial situation to retain the company's good will and previous performance level, it is badly needed to identify and analyze key factors that will make the clients satisfied. As ADN Telecom is service provider company and client satisfaction is their main goal.

1.3 OBJECTIVE OF THE STUDY -

The main objective of the study is to analyze the technical services of ADN Telecom Ltd as a network solution provider in private sector and find out the lacking of its service quality on the other hand also find the strength of their service. The final aim of the study is to find some solutions to resolve this problem and thus enhance better service quality in future.

1.4 RESEARCH METHODOLOGY -

The report is based on both primary and secondary data. As an employee of this organization different information and data has been used in this report mainly by two sources-

Primary Sources: Practical desk work, Discussion with officials

Secondary Sources: Information / Data gathered from different in-house statements, reports, circulars and annual report of the company, Web Site.

1.5 LIMITATIONS OF THE STUDY –

Although I had been tried on the level best to make this report based on facts and complete information available but still there are some limitations that are inevitable.

They are following:

- 2 The main obstacle while preparing this report was time. As the tenure of the internship program was only three months, and the area is vast. So, it was not possible to highlight everything deeply.
- 3 Confidentiality of information was another barrier that hindered the study.
- 4 Sufficient records, publications were not available as per my requirement.
- 5 Because of being private limited companies, ADN Telecom keep some information restricted which was not possible to bring together.

2.1 Client Service at ADN Telecom Ltd:

Client service means to provide clients with good services in order to earn profit along with client satisfaction.

Successful client service companies focus their attention on both their clients and their employees. They understand the service profit chain, which links service firm profits with employees and clients satisfaction. This chain consists of five links:

- Internal service quality: Superior employee selection and training, a quality work environment, and strong support for those dealing with clients.
- Satisfied and productive service employees: More satisfied, loyal and hard working employees.
- Greater Service Value : More effective and efficient client value creation and service delivery.
- Satisfied and loyal clients : Satisfied clients who remain loyal, repeat purchase, and refer other clients.
- Healthy service profits and growth : Superior service firm performance.

From the above discussion it can be said that well managed client service companies share a number of common virtues regarding client service. Successful service companies are “Client Obsessed”, and set high service quality standards.

2.2 Managing Service Quality:

Quality may be defined as meeting or exceeding the expectations of the clients. Service firm’s ability to hang onto its clients depends on how consistently it delivers value to them. The like product marketers, service providers need to identify the expectations of target clients concerning service quality. A service firm may win by delivering consistently higher quality service than competitors and exceeding clients’ expectations. These expectations are formed by their past experiences, word of mouth and advertising. After receiving the service, clients compare the perceived service with the expected

service. If the perceived service falls below the expected service, clients lose interest in the provider. If the perceived service meets or exceeds their expectations, they are apt to use the provider again.

Researchers formulated a service quality model that highlights the main requirements for delivering high service quality. The model, shown in the figure below, identifies five gaps that cause unsuccessful delivery.

2.2.1 Gap between consumer expectation and management perception:

Management doesn't always perceive correctly what clients want. The authority may think that clients want prompt service but clients may be more concerned with more responsiveness.

2.2.2 Gap between management perception and service-quality specification:

Management might correctly perceive the clients' wants but not set a specified performance standard. The authority may tell the employees to give fast service without specifying it quantitatively.

2.2.3 Gap between service -quality specifications and service delivery :

The personnel might be poorly trained, or incapable or unwilling to meet the standard or they may be held to conflicting standards, such as taking time to listen to clients and serving them fast.

2.2.4 Gap between Service delivery and external communications:

Client's expectations are affected by statements made by company representatives and advertisements.

2.2.5 Gap between perceived service and expected service:

This gap occurs when the consumer misperceives the service quality. An engineer may keep visiting the valued clients but the client may interpret this as an indication that something really is wrong.

3.1 A Brief History of ADN Telecom:

ADN Telecom Limited is a venture of ADN Technologies. ADN Technologies has been doing business in Bangladesh for more than 30 years. Over the years, it has built a reputation of fairness, and honesty in business practice. It stands tall with unmatched ethical standards and yet, leads one of the fastest growing Business Groups in Bangladesh.

The Group has an annual turnover more than 300 Crore taka. It has built a supply chain that connects all of the sixty-four districts in Bangladesh. The Group has a visible presence in several industries within Bangladesh and has controlling investment in different sectors, namely Construction, Engineering, Shipping, Finance, Online Newspaper, Manufacturing, Power & Energy and Information Technology.

The Profile at a Glance

- Name : ADN Telecom Limited
- Head Office : Red Crescent Concord Tower (7th Floor),
17 Mohakhali C/A, Dhaka 1212, Bangladesh
- Number of Branches : 04
- Services Provided : Internet, Data Connectivity, TDM, Dark
Fiber,
Software, Automation
- Email : info@ADN Telecom bd.com
- Web : www.ADN Telecom bd.com

- Logo



:

3.2 Vision & Philosophy:

ADN Telecom stress the importance of looking at quality from the client’s point of view; examine the quality of service scrupulously just as cautious clients would. For sustainable business the quality of service and the class of service must be in consistence with client's requirement and expectations. ADN Telecom believes that if focusing on clients; everything else will follow.

ADN Telecom is set on a mission to provide Information and Communication Technology solutions to everyone, from the largest career of the nation to the smallest home of the country. The goal is to narrow down the digital divide between the haves and the have-nots, and to connect the have-nots of the nation to the ever growing communication infrastructure of the country.

ADN Telecom believes that “we grow as our people grow. Our team is the key to our success”. ADN Telecom is dedicated to remaining a great place to work and to providing employees with programs, services and benefits that allow them to bring the best to the business and to their personal lives. We achieve synergy through the skills and ideas of all participants. Through collaboration, we strive to find solutions to issues and problems. Personal success is realized through team achievements.

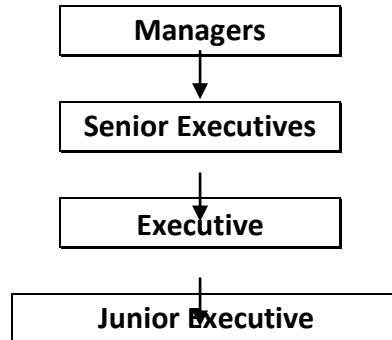
Valuing every individual is a key philosophy of the company. We never compromise on the issues of integrity. Our Code of Conduct reinforces our core values and is a guide to help each team member to make the right ethical decisions and resolve any issues that he or she may encounter. We ensure transparency in every sector and in every activity of the company. We at ADN Telecom have placed compliance as one of our major objectives. We ensure that all of its activities strictly follow the BTRC guidelines and we are committed to adhere to its all future instructions and policies.

3.3 ADN Telecom Strategies

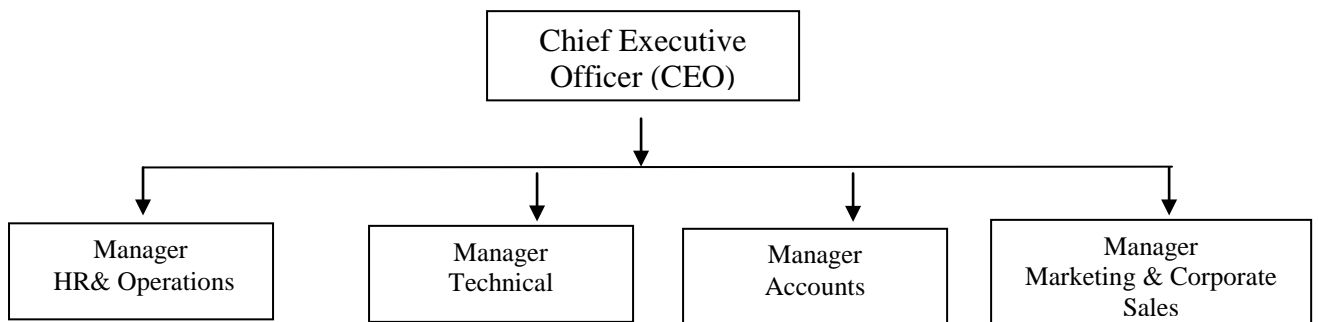
The strategies of ADN Telecom Limited are set out as follows:

- To make available enterprise-grade data connectivity with absolute security solution to business community in order to keep connected and protect their sensitive information.
- Ease and sponsor use of ICT in all sectors of the economy.
- Expand an efficient ICT infrastructure that provides open access to international and national network.
- To facilitate high speed, dedicated bro Bangladesh Commerce Bank Ltd. and connectivity directly to client's premises over a radio/wireless and Optical Fiber link.
- To provide data connectivity almost anywhere in the country through its digital network.
- To help corporate houses create and maintain their identity in an attractive way through dynamic & innovative web sites.
- To introduce the latest connectivity technology for the end users and get the enhancement available in the market.
- Develop a unique group of sales experts and engineers with on-going training and development program all your around.

3.4 An organizational hierarchy chart-



Chief Executive Committee-



The organizational structure of ADN Telecom Ltd is designed according to the various service and functional departments. The Chief Executive Officer (CEO) heads the chief executive committee, which decides on all the strategic aspect of ADN Telecom. The CEO is the person who supervises the heads of all the departments and also is the ultimate authority of ADN Telecom. He is responsible for the all the activities of ADN Telecom and all its consequences. He administers all the functional departments and communicates with the department heads for smooth functioning of the organization.

The Chief Executive Committee is formed with the heads of all departments along with the CEO and 4 more managers: Manager of Human Resources & Operations, Manager of Technical, Manager Marketing & Corporate Sales and Manager of Accounts. As this

report are prepared on Technical services department, that's why only Technical services department has been discussed.

3.5 ADN Telecom Technical Team

Roles and Responsibilities of Employee identified for execution of this project

- **Account/Project Manager**

Supervise the network design, implementation and testing for ADN Telecom Ltd, Shall send status reports to Head of IT/ Person and deal with all operational problems.

- **Network Administrator – Routing and Switching**

Core Design of Network and Switching, Implementation, Configuration, trouble shoot, performance testing and tuning.

- **Network Administrator – Security**

Core Design of Security, Implementation, Configuration, trouble shoot, performance testing and tuning of Security features.

- **System Administrator**

Implement the policy for the Branch connectivity according to the network design.

- **Civil work Administrator**

Overall charge of the civil and electrical work that will is need to erect the towers, grounding and installation of the electrical apparatus and resource management.

- **Network Engineer**

Assisting the network admin with Core Design of Network, Implementation, installation, Configuration, trouble shoot, performance testing and tuning

- **System Engineer –Fiber Network and wireless**

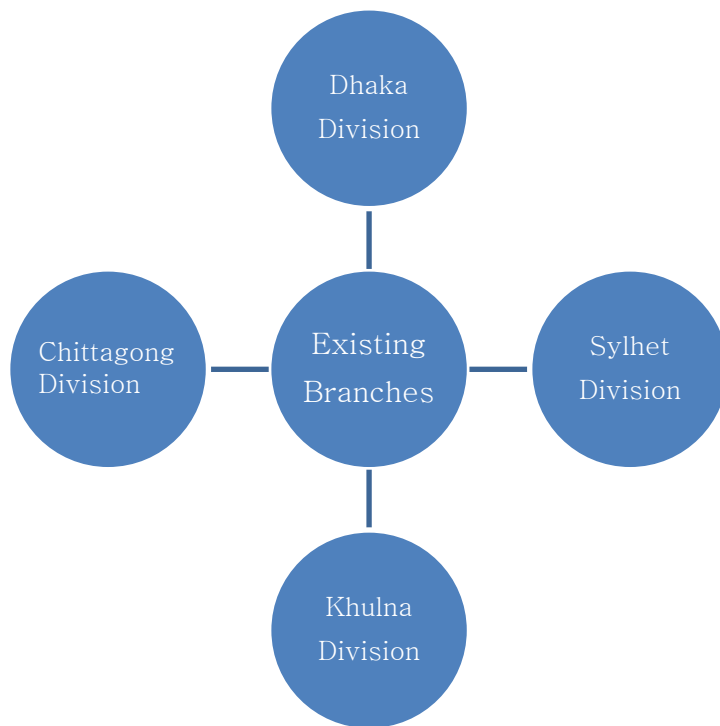
Overall implementation and installation of the guided network

3.6 Field of operations:

- Product of ADN Telecom-
 1. L3 MPLS
 2. L2 MPLS
 3. L3 – Internet
 4. Dark Fiber/Clear Channel
 5. SDH/TDM Network
 6. Transit Providers

3.7 Branch Network:

ADN Telecom has 4 main branches in different divisions and 27 districts coverage by partnership. They have around 245 clients which contain around 2900 nodes within this coverage. Some other proposed branches all over the Bangladesh are already in process to provide better service to their valuable clients.



3.8 Network Coverage Areas:

1. Barishal
2. Bogra
3. Brammonbaria
4. Chittagong
5. Choumohoni
6. Comilla
7. **Dhaka**
8. Dinajpur
9. Faridpur
10. Feni

11. Gazipur
12. Hajigonj
13. Jessore
14. Khulna
15. Kustia
16. Laxmipur
17. Maona
18. Munshigonj
19. Narayongonj
20. NawabGonj
21. Rajshahi
22. Rangpur
23. Sandip
24. Savar & EPZ
25. Sylhet
26. Tangail
27. Valuka

○ **Core POP location:**

1. Dhanmondi
2. Mirpur
3. Gulshan
4. Motijheel
5. Uttara
6. Chittagong
7. Sylhet
8. Khulna
9. Bogra

- **Connection media used by ADN Telecom**

1. Fiber
2. Wireless
3. E1

- **Upstream Providers:**

1. BTCL
2. Mango

3.9 Types of Client

1. BANK
2. Corporate
3. ISP
4. PSTN
5. Social Organization
6. Reseller

3.10 Monitoring Software and its usages –

- **Centrion:** By using this software data- layer 2 and data -layer 3 client and Internet clients can be monitored. And when any client link goes down manually or automatically, it can be understood by the alarm of this.
- **MRTG/Cacti:** By using this software the bandwidth usages of all types of clients (layer2, layer3, Internet, dark fiber) can be monitored.
- **IP Switch:** To monitor real time status of Network infrastructure and clients. Especially layer 3 clients links are monitored by this.
- **SNMPc :** It is used to monitor SDH/TDM network.

4.0 Services offered by ADN Telecom Ltd

4.1 Communication:

ADN Telecom Limited (TCL) offers a unique approach to businesses and organizations for enhancing their communication technology while lowering their expenses. With this

new approach, clients can achieve greater control over the enterprise wide communication through a single point of responsibility for all of their communication needs.

ADN Telecom presents its clients with a full range of connectivity choices through its robust nation-wide network backbone: it offers STM-1, E1, SDH, FTTX connectivity, it also leases dark fibers that run through almost every part of Dhaka city, and to ensure capacity redundancy, it uses fiber cable, radio wave and satellite technology.

4.2 Corporate -Class internet bandwidth:

The Internet is connecting an estimated 820 million computers in 260 countries on every continent, including Antarctica. The Internet is not a single network, but a vast array of loosely connected networks situated all over the world, easily accessible by individual computer hosts in a variety of ways. Today, the Internet uses gateways, routers, dial up connections, and Internet service providers (ISP's) to make itself readily available at all times. Individuals and organizations worldwide can reach any point on the network without regard to national or geographic boundaries or time of day.

Being a Network Solution Provider, ADN Telecom Communication Limited has developed a robust, reliable and well planned fiber optic network with a wide range of capacity including enough facility for leasing unlimited bandwidth to meet networking and communication needs via internet and implement business continuity efforts.

Ten Reasons to use ADN Telecom Internet Service:

1. Fiber Optic last mile connectivity
2. Truly dedicated bandwidth, ranging from 128 Kbps to 10 Mbps
3. Assurance of network availability up to 99.9%
4. VSA Redundancy & Multi homing Network with auto switchover on link failure
5. Physical Redundant Path
6. Maximum Coverage, Available anywhere in the city
7. 24 X 7 X 365 Support Service

8. State of the art Hardware, Equipments and Data Center
9. Long power backup, Four Layer of power back up
10. Disaster Recovery Plan

4.3 Email Services of ADN Telecom (powered by google):

Email, or Electronic Mail, has become an important method of business communication. Used properly it is an extremely efficient and effective form of communication that can be used to transmit all kinds of electronic data. Now days it has became a part of our life. A company without an Email address in today's global market is unimaginable. Its low cost, high speed, convenience and record keeping features have made it the most popular communication tool of today.

ADN Telecoms Limited brings you the most advance, sophisticate, error free and user friendly emailing system both for your personal and official use. We use the most modern emailing system with a technology partnership with Internet Giant Organization 'Google'. Our user experiences a swift, error free mailing system to communicate and collaborate more effectively. Our valued clients can use either our @ADN Telecom bd.net domain or their own domain (i.e. userer@userdomain.com). If client want to host all their email at your facility or wish to host it at ADN Telecom Data Center we can provide it too.

Features & Benefits:

1. Huge Storage: 4GB of HUGH storage so you'll never need to delete another message.
2. SMS Notification: Be notified when you receive mail or a mail from someone particular.*
3. Search: Use Google search technology to locate the message you want.
4. Contact: Integrated contact list helps you keep track of your contacts.
5. Calendar: You can keep track of your tasks & appointments and set email or SMS reminders.

6. Large Attachments: Increased attachment limit (20 MB)
7. Virus, spam and phishing protection: Powerful technologies to effectively block viruses, filter spam, and alert you when you receive phishing messages. These features help provide a safer email experience.
8. Local Hosting: Host your email server at your own premises for greater confidentiality. *
9. Use Domain: Use your own domain i.e. yourname@yourcompany.com
10. POP IMAP and mail forwarding Download messages from your email account to applications like
11. Outlook and Eudora, or POP messages from another email address into your inbox, or forward all your emails to an address of your choice.

4.4 IP/MPLS (Multi protocol Label Switching):

Multi Protocol Label Switching (MPLS) is a data carrying mechanism which is a hybrid of both circuit switching and packet switching. ADN Telecom's MPLS solution aims to address many of the existing issues associated with packet forwarding in today's Internetworking environment. The MPLS architecture describes the mechanisms to perform label switching, which combines the benefits of packet forwarding based on Layer 2 switching with the benefits of Layer 3 routing.

Integration of MPLS application features such as Layer 3 VPNs; Layer 2 VPNs, Traffic Engineering and QoS, and enable the development of highly efficient, scalable, and secure networks that guarantee Service Level Agreements. MPLS delivers highly scalable, differentiated, end to end IP services with simple configuration, management, and provisioning for subscribers. A wide range of platforms support this solution, which is essential for Enterprise networks.

ADN Telecom is offering the MPLS L2 and L3 VVPN which are widely accepted around the world among the enterprise clients for their ability to create a cost effective and secure enterprise intranet using a service provider network.

Features & Benefits:

1. More Secured Network.
2. Traffic isolation.
3. IP Addressing flexibility.
4. Scalability and manageability in terms of configuration.
5. Easy implementation of traffic policy.
6. Maintains CoS and QoS
7. Multi protocol support
8. Faster Forwarding

4.5 IPLC (international Private Leased Circuit):

IPLC (international private leased circuit) is a point to point private line used by an organization to communicate between offices that are geographically dispersed throughout the world. An IPLC can be used for Internet access, business data exchange, video conferencing, and any other form of telecommunication.

In Bangladesh few providers are already started delivering the service including BTTB. ADN Telecom Limited has developed IPLC solution, offering a complete or partial (local) ordering facility and implemented their Next Generation Network (NGN) which ensures high speed & high capacity data applications with low error rate and multi bandwidth options over a TDM network with fiber optic backbone.

Features & Benefits

1. We make the managed service with no hassles allowing the clients to focus on their core activities.
2. We provide this service at a wide range of transmission speeds, beginning from 64 Kbps advancing up to 2 Mbps and if justified can be up graded to a higher bandwidth up to 45 Mbps.
3. The quality of our network and those of our carrier partners means you get virtually error free transmissions, no matter where in the world you are sending your data.

4. The sections of our circuit provided on our own networks are fully resilient, guaranteeing uptime for your mission critical data.
5. Provision of choosing multiple international IPLC carriers.
6. Last mile connectivity with fiber optic cable with redundancy (if required).

4.6 TDM Solutions:

Time Division Multiplexing is a type of digital multiplexing in which two or more signals or bit streams are transferred apparently simultaneously as sub channels in one communication channel, but physically are taking turns on the channel. The time domain is divided into several recurrent timeslots of fixed length, one for each sub channel. It is significant to note that the bandwidth is dedicated end to end, which means that the minimum bandwidth of 64kbps cannot be compromised under any circumstance.

ADN Telecom Ltd offers Clear Channel circuits based on TDM (Time Division Multiplexing). This point to point leased circuit based on multiplexing can provide multiple n X E1 and n X 64kbps data channels and deploying them on any standard interface. We have developed a robust, reliable and well planned fiber optic network with a wide range of capacity (STM 1) including enough facility for leasing E1 and multiple E1 by establishing SDH Ring to meet networking and communication needs connect multiple locations and implement business continuity efforts. We use cutting edge equipments having features like 1+1 ring protection, 1:1 ring protection, hardware redundancy (device, card, power unit etc).

Features & Benefits

- Affordable carrier class availability for Telecom operators
- SNCUSTOMER CAREP/UPSR ring protection
- MSPP (1+1) protection for TM
- Optional MSP (1+11) protection as ADM
- Redundant power card
- Hot swappable plug in cards
- TMN management

- Can provide flexible transmission rate like E1, STM 1, STM 4 etc.

4.7 Dark Fiber:

An optical fiber is a glass or plastic fiber designed to guide light along its length. Optical fibers are widely used in fiber optic communication, which permits transmission over longer distances and at higher data rates than other forms of communications. Fibers are used instead of metal wires because signals travel along them with less loss, and they are immune to electromagnetic interference. Optical fibers are also used to form sensors, and in a variety of other applications. Dark fiber (a.k.a. unlit fiber) is the name given to individual fibers that have yet to be used within already laid cables. They are hence not yet connected to any device, and are only there for future usage or to be leased out.

ADN Telecom has built a metro digital network on fiber optic technology that flows through every part of the Dhaka city and a nationwide backbone that connecting all the major cities of Bangladesh. Our backbone, a multi core fiber cable network, provides true redundancy in the data path. This means in case of most cable failure/cut, we may re route your data traffic to ensure that data packets reach their intended recipients. We have one of the largest physical fiber infrastructures in Dhaka city stretched from Gazipur to Narayanganj. We strictly follow the industry norms during the whole fiber installation process. We ensure a low span loss and splicing loss throughout the network. We perform regular maintenance and testing on our fiber optic cables we have a dedicated support team of fifty plus personals who are working 24 hours a day, 365 days a year.

Features & Benefits

1. Premium Quality Multi tube Fiber Optic Cable (TIA approved).
2. Available up to 448 cores.
3. Widest area coverage with true redundancy.
4. Very Low Span Loss & Splicing Loss (<0.2dB).
5. Flexible lease terms
6. Regular monitoring and testing
7. 24 Hours Support, 365 days a year

8. Wavelength: 13110nm/1550nm
9. Usable for both unidirectional and bidirectional transmission

4.8 Business Intelligence: software & Application Development:

Every business leader is well aware of how crucial it is to make the right decision at the right time. In today's hypercompetitive markets, small businesses and midsize companies face daily, even hourly, challenges to make the right call fast. This means having fast and accurate information from every department in your company, and time away from fighting fires to focus on priorities, problem solving, and market opportunities.

ADN Telecom Limited has put together a team of talented professionals, with a diverse background and experiences, to offer you a variety of customized solutions. We have a track record of offering solutions within a remarkably short timeframe. Our software team is quick in adopting new technologies and vigilant in keeping pace with the evolving software market. To maximize efficiency we develop customized applications which will guarantee better results compared to packaged software available in market. Our Enterprise Resource Management system attempts to cover all basic functions of any organization, regardless of the organization's business or charter. It keeps all critical business information in one place by deploying an integrated business management system that spans all business operations. This synthesis lets you see the whole picture and endow all players in the organization with one version of the truth. In addition, automated, integrated processes are faster and more streamlined, eliminating duplicate entries and making data more up to date and accessible. We have ready to deploy business application modules like:

- Clients Relationship Management: Manage your new sale leads as well as your existing clients.
- Supply Chain Management: Automate our total supply chain and maximize your control.
- Human Resource Management: Manage interviews, evaluate performances, and automate HR processes.

- Project Management: Assign responsibility, monitor activities, ease communication and see results.
- Product Lifecycle Management: Plan, make schedule, simplify processes, real time monitoring.
- E Commerce Solution: Create your online outlet for the world. Enter the global market.
- Mobile Computing: Make your mobile phone a powerful business too

4.9 Website Design & Hosting:

The Internet has increasingly becoming an important source of information for millions of people worldwide. The benefit of having your own web site is, it gets the information about your business to your clients in the fastest and the most cost effective possible way.

You can significantly improve your business image with an Online Presence in the World Wide Web. What you cannot possibly explain in a single meeting, can be presented at your website in an attractive, easily accessible way. In many cases a website can actually save a lot off your advertising cost. If you can tell people where to find a comprehensive catalogue of your products or Service, there is no need to list them all in a printed advertisement. Just a web address at the bottom of your visiting card can make a lot of difference. For exporters, there are no other better ways than this to find new global clients.

Web Design: Creative and attractive design can make your site to stand out from millions of other pages already available in the World Wide Web. Our dedicated team of experienced designers, having professional degree in Arts & Design, is dedicated to design a page which will attract a large number of users.

- **Dynamic Web:** At this age of web 2.0 revolution, websites are not only used for "static" documents presentations, but increasingly being used to present information in a more creative way. Contents on a website can change, in response to different contexts or conditions. Using these features more wisely, we can make more user friendly and accessible websites.

- **E Commerce:** You can set up your own shop and sell your product to world wide clients. You can display your products or services, and make secured credit card transactions on your site to turn your site into a marketplace. You can reach millions of clients worldwide through your e commerce site.
- **Web Hosting:** At ADN Telecom Data Center we offer huge web space, large traffic bandwidth, 99.9% uptime assurance, 24X7X365 support, FTP account, High Performance Servers, Database Support, Redundant Power Backup, Disaster Recovery Plan, and more.

4.10 MAP work:

The single most comprehensive GIS in Bangladesh began its journey at Map work, The GIS wing of ADN Telecom Ltd. On way to integrate the economic, public health, demographic, and many other pieces of digital information into this redundant, triple tier secured information system.

- **Image Processing:** We offer image processing services including image acquisition, fusion, image processing, mosaicing, stereo image analysis, flood classification, data conversion from maps, cartographic standardization etc.
- **Georeferencing & Digitization:** We can georeference any topographic maps. It is an essential step if the maps are to be used in a GIS environment. We can digitize different features from maps and assign attribute data, according to your specifications. This produces line, polygon, point, and text data sets, georeferenced, that anyone can use in any common GIS or CAD environment. The data can then be overlaid and combined with other raster or vector data and integrated directly into the specific project. Data can be provided in any of the above mentioned formats, and in any projection.
- **Survey:** Differential Global Positioning system (DGPS) survey is one of the most modern techniques for collecting high accuracy spatial data and for the production of quality GIS database. We execute Global Positioning System surveys using state of the art GPS devices to establish high accuracy databanks

for geo referencing satellite images and for the extraction of GIS data layers from high quality satellite data.

- **Mapping, Atlas & Cityscape:** We are capable of developing digital map of from scratch. We are independent publisher of digital maps. Cityscape is a project by Mapwork which presents the digitized Dhaka City through a user friendly web application. You can search places, address, and business outlets within the city.

4.11Automation

Automation plays an increasingly important role in the global economy and in daily experience. We provide automation services in several business sectors where security, quality and reliability are the main issues.

Currently, automation used in the leading global companies not only for the purpose of increasing productivity and reducing costs, but also for broader issues, such as increasing quality and flexibility in the manufacturing process. It can be a large industry or an office or even your home, where automation can play a significant role. We provide Remote Surveillance Solution using CUSTOMER CARE TVV camera (suitable for small facilities) or IPP Camera (suitable for larger facilities) to monitor and record in a standalone or networked environment. You can monitor your facility from a remote location within your network or using the internet. We offer state of the art Video Conferencing solution using equipments from industry leaders. Now a day it requires quite a long time to move from one office to another. By adopting a video conferencing solution you can be two places at a time and save significant amount of time and energy. Automated Attendance system can save a lot of time and energy that is required to prepare attendance registers and salary sheets. Our Access Control System allows you to secure your industry or workplace. Using state off the art biometric fingerprint recognition system or RFID you can allow or disallow access. Controlled Premises Solution can give you a picture of who is where in real time. It will keep log of every movement within your premises.

Supply Chain Automation can give you a greater control over your products. By using cost effective mobile equipment armed with customized software the whole supply chain

can interact directly with a single database which results real time information of storage sale and new requirements. Asset Tracking & Monitoring can help you track your vehicles or product in real time and increase reliability of service.

5.0 Client Support procedure at ADN Telecom Ltd:

5.1 The ADN Telecom Approach: Analysis

Understanding: We truly believe that our client is the purpose of our work.

Understanding you and your business is the most important factor to find the best solution for your requirements. So we listen and concentrate all our resources to deliver superior value to you. We perform detail survey on the existing system and infrastructure, talk to you and our IT department just to have a better understanding.

Need Analysis: We treat each case as unique and look for the solution that will best fit the requirements. You may need a solution with maximum flexibility or you may need the solution having best value for money. Analyzing your short term and long term goals we pick the solution that best fit your criteria.

Preparation: We do our home work before we go to the field. Our GIS department develops the route plan for implementing the physical fiber optic cable infrastructure. We do detailed drawing of the actual cable path using state of the art GPS equipments. Our network department develops a detailed network diagram and finds out which equipments fits best for the solution. Then we perform laboratory testing or at least 24 hours by running a model for the actual solution at our lab.

Implementation: Our Technical team strictly follows the standards predefined and acts accordingly. We use quality tools and act on fool proof plan which results not only flawless and quick installations, but also maintains the quality of our work.

Maintain. We have a systematic and continuous process for monitoring and making adjustments to our network. We monitor each and every node all the time 365 days a year. We maintain log of all correspondences, all trouble shootings and all maintenances.

Improve: Our experts and support engineers will recommend and implement new technologies that complement and enhance your current network configuration according

to your business needs. We have a running Research and development laboratory which is continuously searching for innovative way to serve you better.

5.2 ADN Telecom Support:

At ADN Telecom, we understand the mission criticality of your service and the importance of uninterrupted Communication in your business. It is obvious, that support to its kind has to be prompt with minimum response time and with excellent accuracy. Keeping it in mind ADN Telecom has formed a team of Support with potential resources to meet requirements as desired in today's demanding market. ADN Telecom recognizes that human capital is the key to success in today's business environment. The company's highly specialized and experienced personnel are pivotal to achieving demanding objectives and advancing the capabilities of the company to better serve its clients. With a focus on high quality, our team offers fast paced, accurate and reliable service to our valued clients.

To achieve true client's satisfaction, we have designed our technical team and client's service department in a very nontraditional, user friendly format we use state of the art ticketing system to make sure every requirement is being taken care of promptly and efficiently. Furthermore, we assign a single point of contact for our priority clients. The company's technology expertise and ubiquitous, advanced network are the clear advantages in a field with increased technical complexity and in a market environment that favors one stop, end to end services provision. To reduce response time, each one of our rapid response teams would be physically located in different parts of the city to minimize the impact of traffic or adverse weather. The team's goal is to be physically on site as soon as possible. Our guaranteed minimum (not more than 3 hour) response time for retainer clients ensure that your questions and issues are addressed quickly and efficiently.

Key features of ADN Telecom support include:

1. Network Monitoring in 3 layers.
2. 24 Hours on Call Support.
3. Decentralized Support department for faster action.
4. State of the art network monitoring center.
5. Automated Ticketing System for flawless support

6. Prompt Field Support (approximately 1 hour in city during office time).
7. Skilled Resource having expertise to different platform.
8. Monthly Network Performance Report

When someone complains through e-mail/over phone/sales, two types of issue are raised which are following:

- 1. Normal Issue**
- 2. Technical Problem**

1. Normal Issue:

Normal issue is raised after a client complains that they are facing some problems which are a misperception in many cases. In the same time clients is clarified about his facts and figures which are most of the time up to date. Some times in an event where the clients insists about a regular problem such as, the client should be provided with the necessary amount of solution over the phone within 5-10 minutes by the Customer Care after which the clients should report to have resolve the problem. On an average such issues are raised 60% of the times.

5.3 Technical Problem:

Sometimes it become close to impossible for the Customer Care to resolve the problem over the phone and it is at that point in time when the Customer Care is required to forward the issue to the concerned department. The respective departments then become solely responsible for solution and the feedback.

1. The CUSTOMER CARE receives a phone call or e-mail or monitoring through NMC.
2. CUSTOMER CARE should try to provide complete solution within 5-10 minutes after identification of the problem.
3. Upon the failure of the CUSTOMER CARE to solve the problem within 10 minutes the issue should be open a ticket and raised a support from simultaneously to the concerned department within 3 minutes
4. After identification and the lunch of complain then CUSTOMER CARE should be informed from the concerned department regarding the type of solution that should necessarily be provided.
5. If the problem can't solve within 30 minutes remotely then they must assign field support and have to inform CUSTOMER CARE including expected resolution time.
6. If the concern departs able to solve the problem within 3 hours then call center should be informed about the problem and after which the ticket should be closed.
7. If the concern department is unable to solve the problem within 3 hours at the support site then it should inform the call center as well as its own department head.
8. Finally if the problem is not solving within **6 hours (for general cases 24 hrs)** then management must be notified about this problem.
9. At the end of the day the team leaders should report regarding the days work to the clients care manager.

Clients Care manager is responsible for monitoring all the processes mentioned above and should make the necessary coordination amongst other departments.

5.4 Technical Support Team

- Help Desk [24x7]
- Monitoring Team [24x7]
- Field Support – Technical
- Field Support – Fiber

5.4.1 Help Desk:

Major Activities / Responsibilities:

- To make / receive phone calls / complains as and whenever needed.
- Generating a ticket for clients up on complain/s.
- Provide the primary troubleshooting.
 - Close the ticket if the complains are being resolved instantly.
 - Submit a mail to clients with the updated status of troubleshooting, if resolved.
 - Submit a mail to clients with the updated status of troubleshooting with required time frame with the consent of the Reporting Manager, if not resolved.
 - Update the issue / ticket to the Reporting Manager either resolved or unresolved.
 - Maintain a close liaison with the Monitoring Team time to time.
 - Follow up the issue with the concern / assigned Engineers for updated reports to be submitted to clients.

Active Session:

- Session 1 > 08:00 AM – 04:00 PM = 8 Hours
- Session 2 > 02:00 PM – 10:00 PM = 8 Hours
- Session 3 > 10:00 PM – 08:00 AM = 10 Hours
- Regular Session > 09:00 AM – 06:00 PM = 09 Hours

Action Plan:

- Reporting to office within the reporting time to the Reporting Manager.
- Take charge of the Help Desk with associate tools (PC, Help Desk Phone, Files, Network Diagram, etc.)
- Check the mail for the updates.
- Check the Software for any pending / unresolved issues.
- Study the Network and last mile connectivity.
- Study the nature of client and their associate business.
- Study the nature of complain and its probable solution / rectification.
- Submit a weekly report to the reporting Manager.
- 24x7 monitoring and support team for our valued clients.
- 24x7 monitoring through software (Nagios).
- Provide a notification receiving system for official holidays.
- Updates of activities (if any) are being informed to client time to time through mails and phone calls.
- Make necessary calls to client of existing status is being found to be changed.
- The MRTG graph that is assigned for individual client helps us to ensure client current status current status and that of network congestion at the same time.
- All of our Base Terminal Station (BTS) and our Network backbone (P2P/ P2MP) are being monitored to ensure any sort of Network interruption.
- Possible troubleshoot over phone if concern person is available.

ADN Telecom Support Arrangement

After Hours Support:

Clients with critical technical issues can call at Help desk the first level technical support engineer who will provide the following supports:

- **Phone Support:** upon receiving the phone call Engineer will do the general trouble shooting to resolve the issue.

- **On site visit:** when the issue cannot be resolved through a telephonic conversation, on call support Engineer will visit the site within the next 12 hours.
- **Escalation Team:** will visit the site same day if the problem still exists and provide guaranteed solution with the help of Manager of the Technical Support Services team in order to bring the issue/problem to resolution.

5.4.2 Monitoring Team (24/7)

Major Activities / Responsibilities:

- Monitor the Network (Backbone, Infrastructure, Client end connectivity) through the NMS.
- Maintain a log / resource file for installed clients, important contact numbers of concern person for respective location through the customized software.
- Maintain a liaison with Clients Care / Help Desk personnel.
- Follow up the pending issue, if any, for any technical assistance required for Help Desk / Field Support.
- Generating a ticket for clients up on complain/s.
- Provide the primary troubleshooting.
- Close the ticket if the complains are being resolved instantly.
- Submit a mail to clients with the updated status of troubleshooting, if resolved.
- Submit a mail to clients with the updated status of troubleshooting with required time frame with the consent of the Reporting Manager, if not resolved.
- Update the issue / ticket to the Reporting Manager either resolved or unresolved.
- Follow up the issue with the concern / assigned Engineers for updated reports to be submitted to clients.

Active Session:

- Session 1 > 08:00 AM – 04:00 PM = 8 Hours
- Session 2 > 02:00 PM – 10:00 PM = 8 Hours
- Session 3 > 10:00 PM – 08:00 AM = 10 Hours

Note: One (1) Engineer and one (1) Technician will be responsible for required monitoring. A complete Roster duty schedule will take place for each individual / resources / Team. The ratio could be increased as and whenever required with the expansion of the Network.

Action Plan:

- Reporting to office within the reporting time to the Reporting Manager.
- Take charge of the Job with associate tools (PC, Support Phone, Files, Network Diagram, Software, etc.)
- Check the mail for the updates. & Check the Software for any pending / unresolved issues.
- Study the Network and last mile connectivity.
- Study the nature of client and their associate business.
- Study the nature of complain and its probable solution / rectification.
- Submit a weekly report to the reporting Manager.

5.4.3 Field Support:

Major Activities / Responsibilities:

- Ensure the smooth connectivity at client end with the robust Network.
- Ensure the quality of services reach to client satisfactory in coordination with NOC.
- Maintain a liaison with NOC / Clients Care / Help Desk & Monitoring Personnel time to time.
- Follow up the pending issue / Ticket, if any, for any technical assistance required for Field Support.
- Generating a ticket for clients up on complain/s.
- Provide the required troubleshooting.
- Close the ticket if the complains are being resolved instantly.
- Submit a mail to clients with the updated status of troubleshooting with the root cause and the initiatives taken, if resolved.

- Submit a mail to clients with the updated status of troubleshooting with required time frame with the consent of the Reporting Manager, if not resolved.
 - Carry out the assigned tasks within the given time slot.
 - Update the issue / ticket to the Reporting Manager either resolved or unresolved.

Active Session:

- Session 1 > 09:00 AM – 06:00 PM = 8 Hours.
- Session 2 > Will be available during the crisis / critical issues on call basis.

Note: One (1) Engineer and Two (2) Technicians / Assistants will be allocated each PoP across the Capital. Weekly basis Roster duty will take place for each individual / resources. The ratio could be increased as and whenever required with the expansion of the Network to the respective locations.

Action Plan:

- Report to Work Station / office within the reporting time through the Reporting Manager.
- Take charge of the Job with associate tools (PC, Support Phone, Files, Network Diagram, Software, etc.)
- Check the mail for the updates and for any assigned tasks.
- Check the Software for any pending / unresolved issues.
- Make or place requisition for tools / money / devices if required to be replaced.
- Submit a troubleshoot form after successful / unsuccessful completion of the task to the Reporting Manager.
- Update the file (both in the database and the hard copy)
- Study the Network and last mile connectivity.
- Study the nature of complain and its probable solution / rectification.
- Submit a weekly report to the reporting Manager

5.5 Service Escalation Process:

Service Level 1:

Standard level of maintenance & service that is maintained on regular basis.

- 24/7 monitoring and support team for our valued customer.
- 24/7 monitoring through software (Nagios).
- Provide a notification receiving system for official holidays.
- Updates of activities (if any) are being informed to client time to time through mails and phone calls.
- Make necessary calls to client of existing status is being found to be changed.
- The MRTG graph that is assigned for individual client helps us to ensure client current status current status and that of network congestion at the same time.
- All of our Base Terminal Station (BTS) and our Network backbone (P2P/ P2MP) are being monitored to ensure any sort of Network interruption.
 - Possible troubleshoot over phone if concern person is available.

Service level 2:

Secondary level of service that is required client site visit.

- If any critical issue arises, where ADN Telecom Ltd. fails to provide phone support then, reach client site instantly with full-equipped team.
- To ensure better performance of existing link we give official visit to our client site in a regular interval.
- ADN Telecom Ltd. support team will visit the site same day if the problem still exists and provide guaranteed solution with the help of Manager of the Technical Support Service team in order to bring the issue problem to resolution.

Service Level 3

This level is mostly based on the equipment’s maintenance or replacement requirement and is fully designed to minimize equipment’s downtime and optimize performance of the used equipments.

- Software upgrades to latest revision where appropriate.
- Standard warranty is 1- year for all hardware products that ADN Telecom Ltd. maintains in supplying to client. ADN Telecom warrants that hardware products (“Products”) will be free from defects in materials and workmanship for one year following date of shipment to the original purchaser.
- Software upgrades to latest revision where appropriate.
- Extended warranty is also available, In addition to the standard hardware warranty.
- Our standard average turnaround times are 24 hours depending on clients support package as well as additional factors. ADN Telecom Ltd. will repair or replace defective hardware during the warranty period of the products.

Service Escalation Matrix

Service Level	Within Dhaka Metropolitan City	Outside of Dhaka Metropolitan City
Level 1	All the year round 24x7service maintenance	All the year round 24x7service maintenance
Level 2	2 hour response time	8-10 hours response time
Level 3	3 hour response time	10-12 hours response time

5.5 Findings of the Study:

ADN Telecom Ltd is available to provide the clients with advice and support on any aspect of networking solution. Here are some findings according to the SWOT analysis to evaluate the Strengths, Weaknesses/Limitations, Opportunities, and Threats involved the overall technical support.

5.6 SWOT Analysis -

Strengths [Internal factors]

- Good networking skills.
- Excellent communication skill
- Customer relationship
- Problems are responded promptly
- Employees always search for solutions for the clients.
- Highly qualified, competent and experienced personnel.
- Good in-house training programs have produced credible staff.
- Nationwide network coverage with district level representation
- As a solution provider, ADN Telecom is trustworthy to its clients and very sincere to keep clients information secret.
- ADN Telecom Ltd always gives individual attention to its clients.
- Value added service like SMS notification, on line support facility exists to ADN Telecom.

Weakness [Internal factors]

- Employees always search for solutions for the clients.
- Disaster recovery time is too high
- Poor promotional activities
- Lack of self-discipline: few can work without supervision.
- High staff turnover leaves some projects unfinished.
- Lack of information and technical expertise.
- Limited financial support for better solution

- Duplication and repetition of same failed projects.
 - Channels of communication are too long to be effective
 - Lack of systematic approach
 - Poor planning skills
 - Boredom among employees due same routine work
 - Poor logistical support, transportation facility and equipment.
 - Sometimes conflicts between team leaders and departments at the decision making.
 - Except regular issues other requests and complain handling process is too lengthy as well as time consuming
- Opportunities [External factors]**
- Market trends
 - New technologies
 - More autonomous process
 - New career direction with new challenges
 - New distribution channel nationwide
 - Improved collaboration and efficiency through department mergers and other system actors.
 - New staff and faculty hires, evaluation and possible reconfigurations of positions
- Threats [External factors]**
- Clients faith loss in to service providers.
 - No specific training qualification
 - No long holidays or fixed holidays
 - Lack of management experience
 - Unused to working in a variety of environments
 - New competition in the market with new product and services
 - New technology like NTTN vendors
 - The down time is too high in case of field support
 - Prices are high comparison to competitors.

6.1 Recommendations:

The analysis results have given valuable information as to where improvements are necessary in the support procedure to satisfy the valued clients of ADN Telecom Ltd. Now I recommend the following major things, which will be helpful for ADN Telecom Support:

- NSP is a service-oriented business. Its business profit depends on its service quality. That's why the authority always should be aware about their service quality which depends on the support procedure.
- As ADN Telecom providing 24x7 service facilities to its clients, it should immediately take the initiative to improve its' monitoring system and client database by upgrading software with latest version of it.
- Particular technical training is very much required for the employees; and
- Open more new branches to reach the services in remote locations within very short time.
- Fixing different prices for the different segmented markets
- Comparing the price with our competitors
- The service of the existing clients should maintain according their requirements but the Pricing shouldn't Increase Rapidly.
- Providing adequate resources.
- Effective customer communication.
- Empower employees towards commitment to quality.
- Continuous improvements based on self and customer assessment.
- Responsive to changes in technology, society and environment.

6.2 Conclusion

ADN Telecom Ltd is a modern solution provider. It is committed to provide high quality services / products to its valued corporate clients. They are operating efficiently with its existing products and services. It has remained profitable from the inception of its operation in the networking sector. The emergence of fierce competition and adverse economic condition has forced them to be innovative in offering its products and customer services.

Service quality is a critical component of customer perceptions. In the case of pure services, service quality will be the dominant element in customers' evaluations. It is experiencing serious communication problem. The company should give full attention to improve its existing service escalation process to solve problem.

The services which they provide to their clients need to be very prompt and quality one considering the severity as they offer corporate networking solution. .

Finally, I must again confess that the scope of study is much more than that we could manage to dig out. I hope further study would be conducted more extensively on this matter to give a complete shape. I also hope that it will be taken seriously by those who are on the driving seat.

References

- Project Appraisal reports of ADN Telecom Ltd [2010-2011]
- Manual of different departments of ADN Telecom Ltd.
- Official web site “www.ADN Telecom.com.bd”
- Kotler.P (2003). Marketing Management, 12th Edition , Pearson and education
- Ronald B. Adler and George Rodman, Understanding Human Communication , 10th Edition,
- Anthony S. Acampora , An Introduction to Broadband Networks: LANs, MANs, ATM, B-ISDN, and Optical Networks for Integrated Multimedia Telecommunications, Springer; 1 edition (January 31, 1994)

Sample of trouble Ticket when a complain raise at Help desk

ADN Telecom Trouble Ticket				
Trouble Ticket Number	TCL_ADN Telecom_1024			
Client Name	AB Bank Ltd			
Trouble Ticket Raiser Info	Name	Location	Contact number	Email Address
	Mr.Mesbah	HO	011*****	noc@abbl.com.bd
Call Time	10.00 AM			
Call Date	24/02/2012			
Link Details	Link ID	From	To	Link Type
		DC,MJ	DR, BD	OH
Description of Fault	Link Down : Fiber Cable Problem			
Expected Restoration Time	04 Hours			
Inform to	Mr.Arif		MJ, Fiber Team	Phone

Sample of trouble Ticket when a problem is solved

TCL Trouble Ticket Closing				
Trouble Ticket Number	TCL_ADN Telecom_1024			
Client Name	AB Bank Ltd			
Trouble Ticket Raiser Info	Name	Location	Contact number	Email Address
	Mr.Mesbah	HO	011*****	noc@abbl.com.bd
Call Time	10.00 AM			
Call Date	24/02/2012			
Link Details	Link ID	From	To	Link Type
		DC, MJ	DR, BD	OH
Description of Fault	Fiber cable burn due to short circuit at adjacent PDB cable			
Link Status	Link is Active			
Link Restoration Time	4:30 PM			
Total Down Time	6 Hours 30 minutes			
Cause of Delay	Need to lay 150 m new fiber cable due to badly damage			
Confirmed by	Mr.Mesbah	ABBL-HO	Phone	

Sample of Ticket for Planned maintenance

Planned Maintenance Notification			
Event	Network upgradation and enhancement at Dhaka Premise (Phase-1)		
Event Reference No.	TT# 3856		
PMW Start Date	28 th January,2012 04:00 BST	PMW End Date	28 th January,2012 08:00 BST
Duration of work	4 hours		
Possible Outage	180 minutes		
Possible Impact Information			
During the maintenance window all the customers subscribing SMICIPBW and SECIPBW services will remain down completely.			