

## Executive Summary

Information System is an integrated structure of databases and information embracing all organization levels of a company, which facilitates the optimum transfer of information to meet corporate objectives. Management need to use information system not only for decision making and making sense of changes and developments in their external environment but also to generate new knowledge which can be applied to design new products and services, enhance existing offerings and improve organizational processes. On the other hand it is also suggested that management do not characteristically solve problems but only apply rules and copy solutions from other. In either case the need is access to information system. Therefore, information system can be identified as the critical resource for management success.

Information systems are costly to purchase, deploy, and maintain. Therefore, in a world where business enterprise is operated for value maximization according to the theory of rational choice, it is natural to suppose that Information system (IS) offers economic value and that this value overcomes the costs. As such it has rightly been an objective of IS research for at least two decades to determine the economic role of IS.

Although information systems research has contributed significantly to the understanding of organizational issues and behavioral roles of users and developers in information systems it has been less successful in developing objective measures of effectiveness of information systems. More than twenty-five years ago noted: Computer information systems are being developed by many organizations in an attempt to improve organizational effectiveness and efficiency. Unfortunately, there is little research evaluating the impact of information systems.

The state of affairs regarding effectiveness research remained unchanged a decade later as evidenced by this lament by two researchers. Implicit in most of what we do in information system is the belief that information technology has an impact on the bottom line of business. Surprisingly, we rarely know if this is true. Finally, the current condition is stated: Measuring the effectiveness of computer based information systems remains unresolved and the topic regularly appears in the top ten of issues, which are requiring attention from the Information system community.

A more ambitious proposal is to define the effectiveness of the information system as the degree to which the business goals, for which the Information system was deployed, are actually achieved. Although these ideas are appealing from a viewpoint of rational objectivism, the difficulty of defining and measuring such variables has forced researchers to once again resort to questionnaires. The end result is that IS effectiveness is determined not in terms of observations made by the researcher but in terms of an average of opinions of users, developers, and managers.

The measurement of Information system effectiveness at the firm level as proposed by necessarily require that the researcher have a theory of the firm that precludes conflict such as that caused by agency issues . These theories allow for managerial behavior that is not consistent with profit or value maximization. Since, managers make information system implementation decisions, managerial behavior and motivation is likely to be important variables in the study of information system effectiveness.

It therefore appears that neither a purely subjective paradigm nor a purely functional paradigm of the firm is adequate for understanding the motivations for and the effectiveness of the deployment of information system. Information system serves the organization, providing managers with reports and in some cases, with on-line access to the organization's current performance and historical records. This System primarily serves the functions of planning, controlling and decision-making at the management level.

Information system summarizes and reports on the basic operations of the company. The basic transaction data from transaction processing system (TPS) are compressed and usually presented in long reports that are produced on a regular schedule. Most Information System uses simple routines and comparisons, as opposed to sophisticated mathematical models or statistical techniques.

Technology advances have increased both the availability and volume of information management and the directors have available for both planning and decision-making. Management also should ensure that managers and staff receive initial and ongoing training in Information system. In addition, user manuals should be available and provide the following information:

- A brief description of the application or system.
- Input instructions, including collection points and times to send updated information.

- A complete listing of output reports, including samples.

Depending on the size and complexity of its Information System, an institution may need to use different manuals for different users such as first-level users, unit managers, and programmers. So, it means that Information system is very necessary for every organization that wants to be profitable organization. PTCL, LTE & Mobilink are also developing their Information systems for customer satisfaction and for up to date information.

In this time PTCL using the payment information system in all revenue offices in Pakistan. The working of payment information system is same. Having so many problems using the payment information system like the information regarding disconnection and transfer of same landline numbers from one location to another taking so many days. Due to this problem some times the revenue office sending defaulter letters to customers. Due to which many customer showing dissatisfaction and it may be a solid reason of decreasing number of customers day by day. Information system is an integrated user and machine system for providing information to support operations, management and decision making function of an organization. This system utilizes computer hardware & software, procedure and model for analyses and database.

There should be a more reliable system that may working more efficiently as compare to the current information system and taking low time of transaction, than PTCL will be maintaining its goodwill and increasing there customers in allover the Pakistan.

## **Role of participation**

### **Broad Problem Area/Background**

Information System is a critical resource for management success; it serves the organization, providing managers with reports and in some cases, with on-line access to the organization's current performance and historical records.

Information system is a system or process that provides the information necessary to manage an organization effectively. Information system and the information it generates are generally considered essential components for planning and reasonable business decisions.

Information system provides management with needed information on a regular basis. It focuses specially on providing managers with information, not merely data. It helps in the transformation of raw data into meaningful information, which helps the manager in performing different managerial operations and functions effectively.

Information system is an integrated user and machine system for providing information to support operations, management and decision-making function of an organization.

## **PTCL – PAKISTAN TELECOMMUNICATION LIMITED**

### **Introduction**

PTCL is the largest telecommunications provider in Pakistan. PTCL also continues to be the largest CDMA operator in the country with 0.8 million V-fone customers. The company maintains a leading position in Pakistan as an infrastructure provider to other telecom operators and corporate customers of the country. It has the potential to be an instrumental agent in Pakistan's economic growth. PTCL has laid an Optical Fiber Access Network in the major metropolitan centers of Pakistan and local loop services have started to be modernized and upgraded from copper to an optical network. On the Long Distance and International infrastructure side, the capacity of two SEA-ME-WE submarine cables is being expanded to meet the increasing demand of International traffic. With the promulgation of Telecommunication (Re-Organization) Act 1996, the Pakistan Telecommunication Authority was established as the Telecom Regulatory body. Following the open licensing policy in BUY @ PKR 45.40 accordance with the instructions of Government of Pakistan and in exercise of powers conferred by Pakistan Telecommunication (Re-Organization) Act 1996, the basic telephony was put under exclusivity and PTCL was given a seven years monopoly over basic telephony which ended by December 31, 2002. The year 2006-07 in the telecom sector witnessed a phenomenal growth in the mobile phone sector in Pakistan, which doubled its subscriber base to 60 million. The Teledensity increased from 26% to 40%, helping to spread the benefits of communication technology across the country. PTCL's mobile phone subsidiary Ufone's subscriber base grew by more than 87%, from 7.49 million to 14 million. The year also witnessed the entry of major telecom companies, most notably China Telecom and Singtel, into the market. Restructuring and re-engineering are in their final stages along

with the implementation of ERP system. From the end customer's perspective, a major initiative was put in place in the shape of 'Broadband Pakistan' service launch as a first step towards providing its customer with more value added service and convenience. With this offering, the PTCL not only bringing the benefit of high speed Internet access to subscribers in major cities but will also generate new revenue streams for future growth.

The telecommunication sector around the world is going a process of rapid change in information technology and convergence with focus on mobile Internet and value added services. In the line with global trends and for meeting and the emerging demand, major initiative have been taken by the company upgrade its network, introduce a range of new value added services and develop a portfolio of information technology, internet and band width related services to enhance the revenue potential of company. Internationally, the current decade has seen restructuring and growth of the Telecom industries. This company's two new subsidiaries companies, Pak telecom Mobile Limited and Pak Net Limited are progressing according to the plan. PTML has selected GSM 900 technology with latest features for its operations. The technology selected will be the third generation. A turnkey contract has been awarded to Nortel Canada for the supply of equipment and technology. The services of PTML are implemented on this technology.

Pak net has acquired a customer base of over thirty thousands in its six months of operation. An annual growth of 60% is expected in the Mobile business while the information technology and the Internet services may grow even faster (close to 100% per annum). PTCL is trying to ensure full accounting separation with subsidiaries to maintain a level playing field for fair competition with the other operators.

PTCL is all set to redefine the established boundaries of the telecommunication market and is shifting the productivity frontier to new heights. Today, for millions of people, we demand instant access to new products and ideas. More importantly we want them for their better living standards with increased values in this ever-shrinking globe of ours.

### **Business & Corporate Users**

For clear communication the first choice of business circles is PTCL telephone for local, nationwide and international calling. Today businesses can have 10-100 lines with modern day services to meet their needs. Now you get options like Caller-ID, call-forwarding, call-waiting, Call Barring, to name a few. 0800-Toll free number, 0900-Premium rate services, VPN-Virtual Private Network, Audio Conference Service, Digital Cross Connect (DXX), ISDN (Policy), Teleplus (ISDN/BRI), Digital Phone Facilities/Modification Charges, UAN, UIN

- **Nation wide in fracture**

We have the largest Copper infrastructure spread over every city, town and village of Pakistan with over million installed lines. The network has over 0.5 million POTS ports with more than 250,000 Broadband ports in 13 major cities.

- **National Long-haul Core Network**

We have over 10,400 km fully redundant, fiber optics DWDM backbone network. It connects over 840 cities and towns with 270G bandwidth.

- **Carriers and services**

As carriers-carrier, we provide the core infrastructure services to the cellular, LDIs, Local Loop operators, ISPs, Call Centers and payphone operators

## Overview of the organization

### Pakistan Telecommunication Company Limited

The Telecommunication sector around the world is going through a process of rapid change in information technology and convergence with focus on mobile Internet and value added services. In the line of global trends and for meeting the emerging demand, major initiatives have been taking place by the company to upgrade its network. The word PTCL is itself is an industry and whole world.

In the year of 1998, PTCL established Mobile and Internet services in which it is very successful. In the year 2000, finally PTCL is formed and finalized the telecom policy.

PTCL provides quality services to their customers. It takes many important decisions and makes many new plans according to the needs of customers. PTCL introduces new services and also improves the quality. Such as:

- Enter in the mobile business.
- Expansion of Internet backbone infrastructures.
- Improvement in management information & financial control system.

The growth of the cellular sector in Pakistan can also be attributable to good governance policies of the government of Pakistan and the Privatization Commission. In April 2006, Emirates Telecommunication Corporation, which is commonly known as Etisalat, has assumed management control of Pakistan Telecommunication Corporation Ltd – part of the \$2.6bn deal to buy a 26% stake in PTCL. The successful privatization of PTCL, and consequently Ufone, is hailed as ushering in a new era for telecommunications in Pakistan. Now, under the management of Etisalat, Ufone will concentrate on customer needs and benefits and is more determined than ever to be the leading cellular player in the market.

### Vision

“ To be the leading Information and Communication Technology Service Provider in the region by achieving customer satisfaction and maximizing shareholders' value'. The future is unfolding around us. In times to come, we will be the link that allows global communication. We are striving towards mobilizing the world for the future. By becoming partners in innovation, we are ready to shape a future that offers telecom services that bring us closer.”



## **Mission**

“To achieve our vision by having.

An organizational environment that fosters professionalism, motivation and quality.”

PTCL provides quality services to their customers. It takes many important decisions and makes many new plans according to the needs of customers. PTCL introduces new services and also improves the quality. Such as:

- Enter in the mobile business.
- Expansion of Internet backbone infrastructures.
- Improvement in management information & financial control system.

## **Core Values**

- Professional Integrity
- Customer Satisfaction
- Teamwork
- Company Loyalty
- Corporate Information

## **Products & Services**

### **PTCL Landline**

Since the deregulation of the telecom sector, a large number of foreign investors opted for licenses in LL, LDI and cellular operations, identifying Pakistan as an emerging market. Investors entered the market forcefully in the cellular segment, introducing heated competition for PTCL. In this situation PTCL's counter strategy for landline service, during the year 2007-08 was aimed to increase ARPU, acquire new subscribers and contain churn. To increase operations, PTCL shifted from its conventional duration based charging system to value based options, like 'Pakistan Package' that offered 5,000 minutes for on-net nationwide calls

at Rs. 199/month. PTCL also launched 'International Plus' package to facilitate cost effective international calls at unmatched rates alongside offering Voice messaging and Phone Net services, adding more value to the landline service. To increase customers' base, 'order on phone' was introduced, allowing customer to apply for a new connection by simply calling 0800-80800.

To tackle the churn PTCL established an outbound call center to reach out to potential customers with an objective to attain higher level of brand loyalty.

### **PTCL V-Fone**

PTCL V-Fone (WLL Service) was another major area of focus for PTCL during the year. A few prominent measures taken in this area during the year were launching of free home delivery service. No line rent package was launched in September 2007. In June 2008, 30 seconds billing was introduced contributing as an effective customer retention tool. PTCL

has expanded the network to provide coverage in all large and small cities including over 10,000 villages in rural areas of Pakistan.

As Vfone becomes the Wireless substitute to landline in un-served areas, it will be a robust line for voice, data and fax services for use at home and in the office. In business markets it will be positioned as the CDMA cellular extension to add trunk lines to the ever expanding business PABXs. Vfone will be spearheading the launch of the new postpaid and pre-pay tariffs with no line-rent to meet the market demand. The tariff will include new post-pay unlimited local and nationwide calling packages to bring traffic back to PTCL's networks to stabilize the revenues.

After the initial launch, the Company aims to retain the momentum by offering different bundled packages for voice to increase the subscriber base, including specifically targeting the rural areas where copper infrastructure does not exist. On Wireless broadband front, a major upgrade of PTCL WLL CDMA network is underway to provide Wireless broadband services in 17 major cities by end 2007. Currently technical trial is in progress which will be followed by a pilot project on WiMax technology. This will enable PTCL to maintain its competitive edge.

### **Ufone**

(Pakistan Telecom Mobile Ltd) a wholly-owned subsidiary of PTCL commenced its operations on 29th January 2001 as a GSM 900 service provider. Since the outset, it has expanded its coverage and customer base at a rapid pace and established itself as one of the leading cellular service providers in Pakistan. Ufone is now considered to be one of the most active, aggressive and innovative players in the mobile sector of Pakistan. The growth of the cellular industry is a direct result of the successful implementation of the telecom

deregulation and cellular mobile policy by the Ministry of IT and Telecommunications (MOIT&T) and the support, guidance and timely enforcement of regulatory process by the Pakistan Telecommunication Authority (PTA).

Ufone's operational performance has been very encouraging despite stiff competition in Pakistan telecom market which has led to reduction of prices to bare minimum level. Ufone managed to improve its revenue and operating profit by 35% and 47% respectively, as compared to the last year through aggressive policies and exercising strict control over expenses.

### **Paknet Limited**

Paknet was incorporated in year 2000 for providing internet related services in the country is being wound up. However, PTCL has developed its own voice, data and video infrastructure and services. Paknet's operations have been closed and liquidator appointed for completing the formalities involving the company closure. All customers, assets, liabilities and capital stand transferred to PTCL in accordance with the special resolution passed in General Meetings.

### **PTCL Broadband**

The first major product initiative taken towards a changing PTCL during the year 2006-07, was the launch of PTCL's Broadband service under the theme of 'Broadband Pakistan' by the Prime Minister of Pakistan. The service was launched on PTCL's new state of the art Broadband infrastructure that was added to our network during the last three quarters of 2007 with the initial capacity of over 100,000 subscribers.

PTCL achieved unprecedented success as it added over 10,000 customers within the first 120 days of its launch while historically it had taken four years collectively for all the other

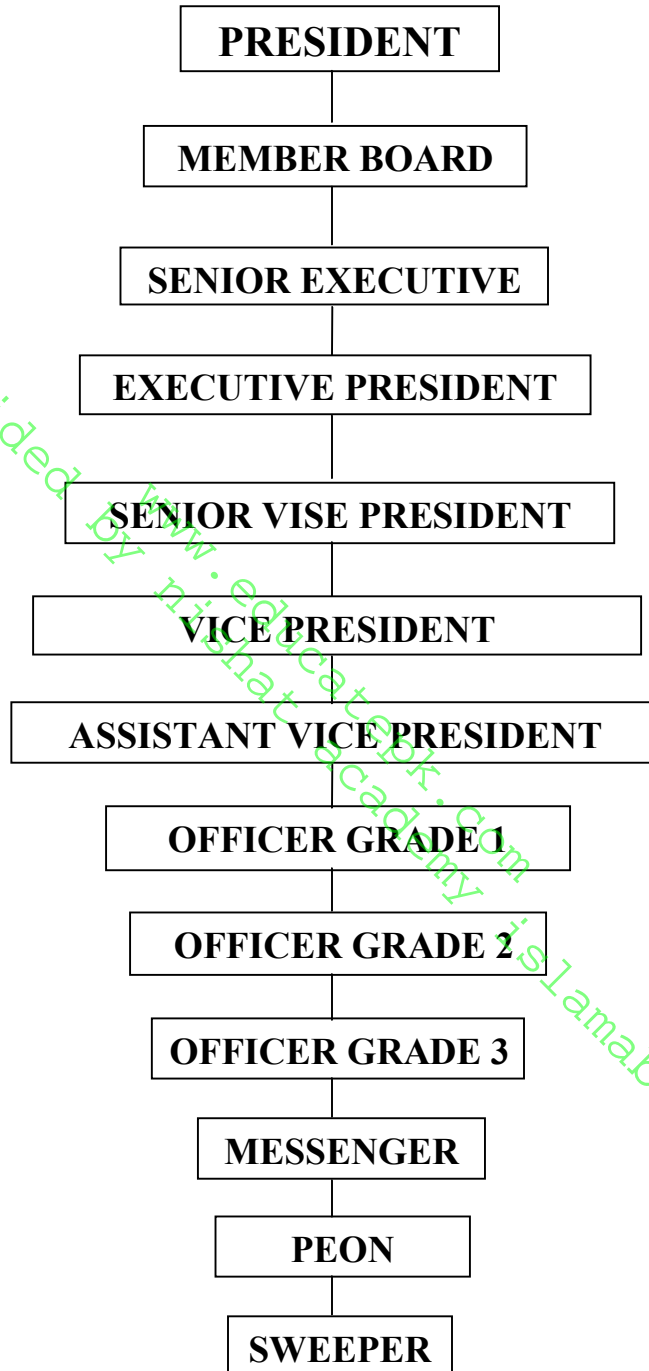
operators to achieve 30,000 customers in Pakistan! The hallmark of PTCL service was the removal of the traditional barriers such as the upfront costs of installation and customer premises equipment and added bandwidth download. This high customer take up also reflected on the Company's trusted image in the eyes of the nation. The service is already available in the five largest cities of Pakistan and will be expanded into another dozen cities during the coming year.

### **Smart Services**

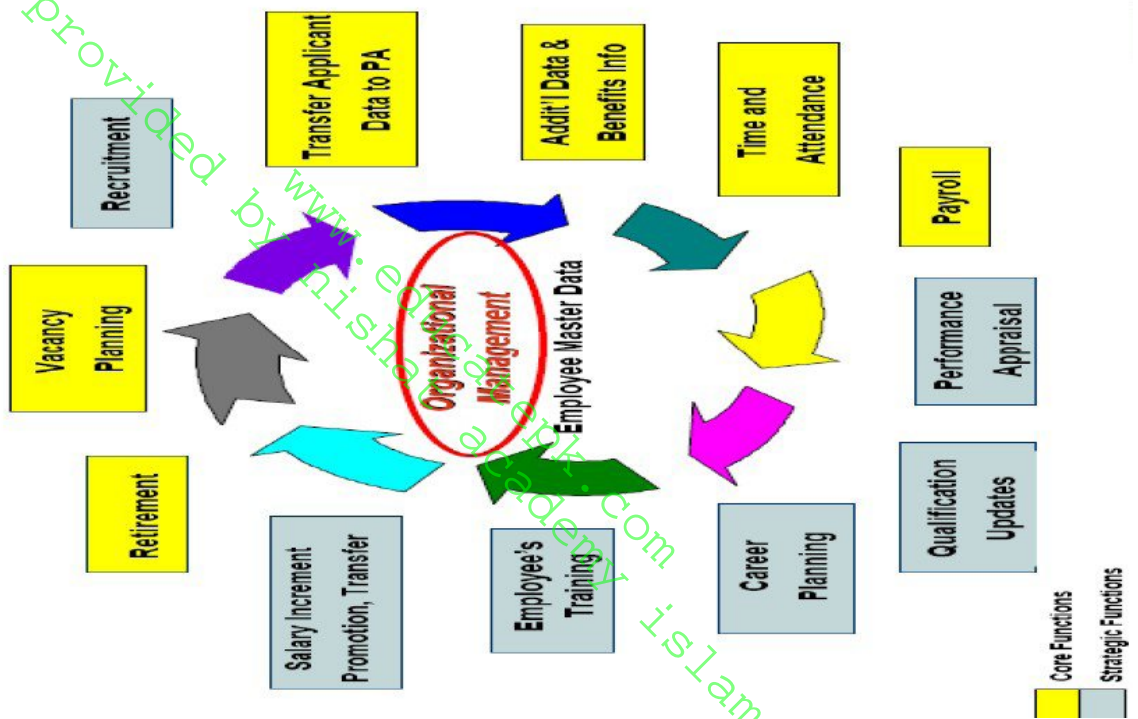
In March 2008, PTCL introduced a trial service that put PTCL on the path of a paradigm shift. Branded under 'PTCL Smart Line', the service included Interactive Television, Broadband and voice Telephony all at the same time on PTCL's telephone line. The 'Smart TV', for the first time offered TV viewers the power to control the TV channels interactively. This included the ability to rewind and pause live TV channels, block / unblock any TV channel for parental lock and search through video on demand content. The Commercial launch of the PTCL Smart Line services across the three largest cities in Pakistan was arranged on the 14th of August 2008 which will be expanded to the other cities during the course of the year.

## Organization structure

### Hierarchal Designation Vise Chart of PTCL



# Organization management reporting Cycle

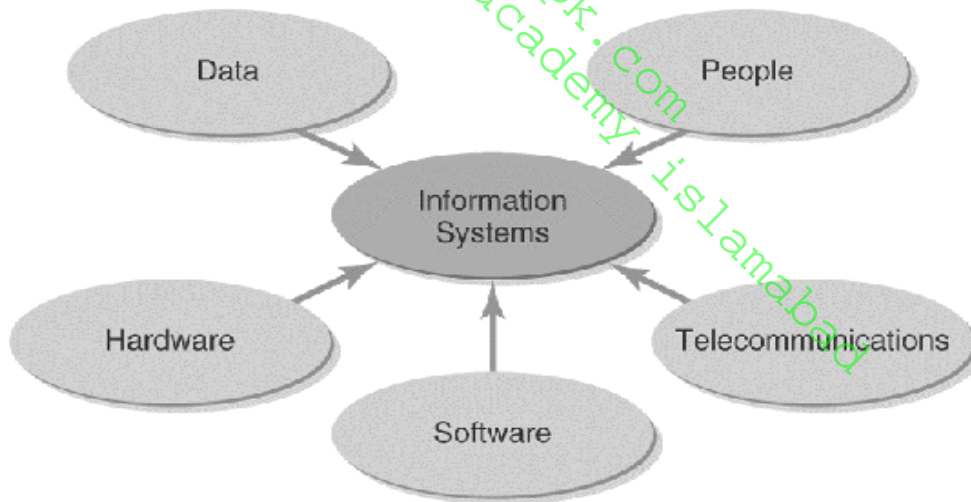


## Introduction of MIS department

- ◆ **First computer installed in PTCL IBM computer 4331**
- Payroll, Cost & Accounts Applications, Officers data and main store Inventory data brought on computer
- ◆ **Updates made in hardware**
- ND computer - 5500
- IBM computer es-9221            1
- ◆ **PC Based Network**
- Applications of IBM & ND systems transferred to PC Based Network
- In-house software development started to expand computerization in PTCL

### OBJECTIVE OF MIS:

- ◆ Enhancing Efficiency & Quality
- ◆ Reducing Costs & Wastages in PTCL Functions & Activities



**FIGURE # 1**

Information system has many benefits for the management of organization. These benefits are following:



### **1. Quick Access to Information:**

The data can be accessed easily at all levels. The authorized managers have easy and quick access to data stored in the centralized terminal. The quick access to information is beneficial for the manager's decision-making process and the customers are also getting reply soon.

### **2. Security:**

The data is protected from unauthorized personnel. The authorized manager is only allowed to access with the help of given Password / Code. Previously the data was being stored in paper files. So, there was great possibility that unauthorized personnel may access to the file and may leak out or steal any information or document. But now database management system ensures security at high extent.

### **3. Contents:**

The data management system enables managers to generate reports accordingly to their requirements. The managers specifically get to know about e.g. due dates of the borrowers, amount of loan borrowed in some defined ranges, or type of loans and the borrowers. The desired record generates and it greatly helps managers to take quick decision and make plans accordingly.

### **4. Accuracy:**

The database management system ensures accuracy. The system does not allow entering information in undefined way. The result generates accurate result since the information is valid and updated.

### **5. Better Data Management:**

As the data is stored in centralized terminal, the manager knows where to find the data. So, the efforts at establishing security, setting data standards and applying other management procedures be centralized at a single location rather than spread out over several.

Information system is a system or process that provides the information necessary to manage an organization effectively. Information system and the information it generates are generally considered essential components for planning and reasonable business decisions .

Pakistan Telecom industry is developing very fast as most of the internet users are switching toward faster internet. Many companies are providing service but the main player in this DSL

industry is Still PTCL. PTCL DSL service which is called Pakistan Broadband Package is highly rated but PTCL customer care department is very sub standard.

Another Big name in DSL service provider is Link Dot Net backed by Orascom Telecom and Mobilink, They are using white labeled Services of PTCL but there customer care department is very friendly. Price for a average home user is Rs 1200 per month which is almost same for any service.

As the networks are new, customer are facing many problems of disconnectivity and unhappy surfing. I started with PTCL but then Switched to Link.net But they I have to switched back to PTCL.

provided by [www.educatepk.com](http://www.educatepk.com)  
nishat academy Islamabad

## Functions of the MIS Departments

### MAJOR ERP BASED SOFTWARE SYSTEMS:

There are following computerized ERP based software projects that has been developed by PTCL and utilized in different departments of PTCL

- Personnel Information System
- Payroll Management System
- Inventory Management System
- Planning and Control System
- Financial Accounting System
- Material Resource Planning System
- Cost and Accounting System
- Electric and Water Billing system
- Telephone Billing System
- Project Monitoring Systems (R&D)

PTCL has its own computerized inventory system for all the kind of information. Every kind of each transaction is fed in the inventory system. From this system every desired person can obtain the requisite information all about the topic. This system is linked up with different departments of PTCL

This system is useful from the following aspects:

#### **i). Personnel Record**

Personnel record is also fed in this system, hence every person can check their record regarding seniority, position in the organization, and other aspects.

#### **ii). Material Control**

Material position is also updated in this system to control and fulfill the requirement. All the indents, vouchers, IFD, annual requirements, receipt store and issued store is updated for quick decisions.

#### **iii). Purchase Position**

Purchase record is also updated in this system. All the contracts are fed for future information regarding purchase rate, supplier and other aspects.

#### **iv). Purchase Procedure**

Purchase procedure is available on this system. Purchase staffs obtain the requisite information from this manual.

#### **v). Supplier List**

The entire registered suppliers list is available on this system; you can get a number of material relevant suppliers within a few seconds.

### **Telephone Directory System**

Telephone directory has prepared on MS Access and available on inter factory LAN. You can obtain the phone numbers as well as other information by entering the some information.

### **Internet**

Internet is also like a huge encyclopedia. PTCL also uses the internet for required information.

- Finding the reasonable suppliers of raw material.
- To check the Raw material prices.
- To check the International purchase policy & procedure.
- Information about the competitors.
- Information about the latest ammunition/weapons.
- E-mail.

### **Expert Systems**

PTCL has also developed many expert systems. For example:

- Purchase procedure.
- Inspection, Proof, and Firing procedure.
- Problem solving programs.
- Machinery Installation system.
- Tool making procedure.
- Operating the new machinery etc

## Major Functions

### PTCL Web Hosting Services

In today's world, a website is an important tool for any business. PTCL now offers world class hosting on windows platform. PTCL provides you the control, flexibility and reliability required to create and manage a successful web presence and our self healing backbone make sure the high availability of your website.

Our web-based Control Panel helps you manage and advertise your site. The Control panel provides you with powerful and easy to use tools to help you manage and control your site.

#### a. Support to other departments

##### Employee Education and Training departments

For the new entrants there is pre service training, which is given in its various training centers throughout the country. PTCL also have “national post graduate institute for telecom and informatics” (NPGITI) in this institute they give training to both new comers and previously working staff.

PTCL is also planning to make NPGITI a university so that they could train the general public and could fully utilize their training facilities. For already employed people they have promotional courses and other courses, which could increase their skill. When a person goes through promotional course then he or she has to clear that course so that they could be eligible for the next course. PTCL give both on job and off job training. Mostly people working in technical field or given off the job training.

##### Quality control department

The quality control department has following functions

- They have to make a clear mission regarding their organization.
- Follow international quality standard of telecom industries
- Senior leadership should have a vision to make PTCL organization liked by public

- To tackle the competition they are going to face in 2003, they have to formulate customer-oriented approach. If they start focusing on their customer from day one then they can be head of their future competitor.
- Taking feed back from the people regarding their products and constantly improving its quality so that people come to them instead of going elsewhere.
- **PTCL** should try to retain their present customer by showing public responsibility, by fulfilling their needs and eliminating their complaints. Because it will cost them more money to make a new customer then retaining old one.

### **Commensuration and reward department**

Reward for the extra ordinary work is very important so that employees remain motivated to do work more efficiently. **PTCL** have also the reward system for its employees so that they remain motivated. They have a separate fund for this purpose and give it to those persons who work more than that require from them. So that such kind of the employee should add value to the company with their efforts.

Other than this reward system it also provides various facilities and benefits to its employees for example, all employees regardless of their position have medicine facility so that they can have medicine for themselves as well as for their families. **PTCL** also have various medical centers and if the person has some serious illness they also referred to another hospital.

## RESULT AND DISCUSSION

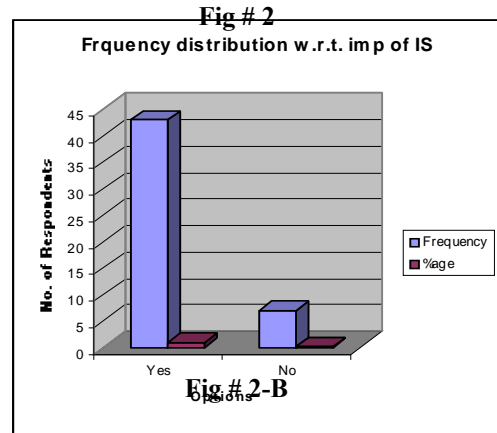
### Q# Is Information System, important for management success?

Following table and graph shows the frequency and percentage distribution with respect to importance of Information System.

#### 1. PTCL (Govt.)

(Table # 2-A)

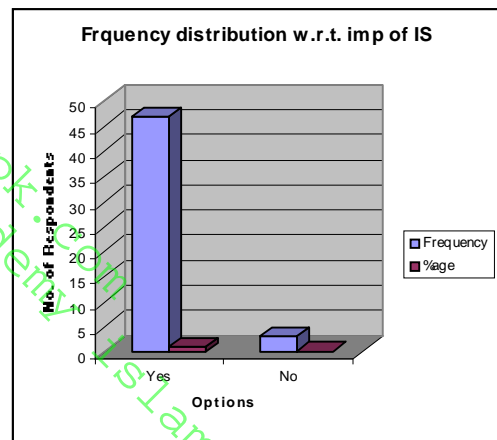
Options	Frequency	%age	Rank
“Yes”	43	86%	1
“No”	7	14%	2



#### 2. LTE (Semi Govt.)

(Table# 2-B)

Options	Frequency	%age	Rank
“Yes”	47	94%	1
“No”	3	6%	2

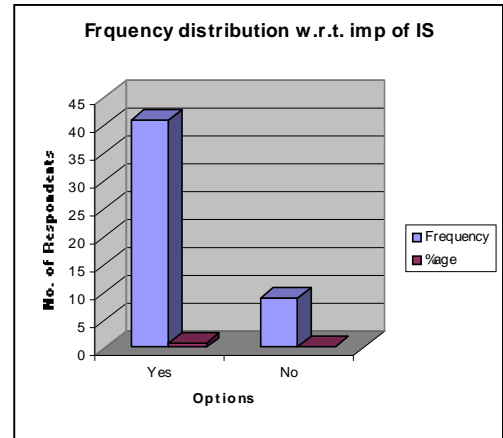


### 3. Mobilink (PVT)

(Table # 2-C)

Options	Frequency	%age	Rank
“Yes”	41	82%	1
“No”	9	18%	2

Fig # 2-C



In question 2, table & figure (2-A) represents that In PTCL out of 50 respondents, 86% of the respondents replied “Yes”. It means that in the perception of these respondents, Information System is essential for the management success. While 14% respondents replied “No”.

While table & figure (2-B) represents that in LTE out of 50 respondents, 94% of the respondents replied “Yes”. It means that majority of people replies; Information System is essential for the management success.

And table & figure (2-C) represents that in Mobilink out of 50 respondents, 82% of the respondents replied “Yes”. It means that in the perception of these respondents, Information System is essential for the management success. While 18% respondents replied “No”.

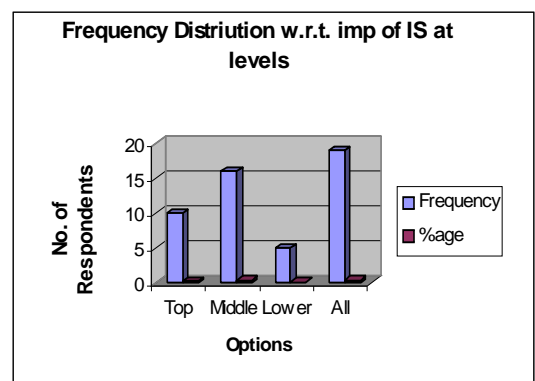
#### Q At which management level, Information System is more essential?

Following table and graph shows the frequency and percentage distribution with respect to essentiality.

##### 1. PTCL (Govt.):

(Table # 1)

Levels	Frequency	%age	Rank
Top	10	20%	3
Middle	16	32%	2





Lower	5	10%	4
All	19	38%	1

## 2. LTE (Semi Govt.)

(Table# 3-B)

Levels	Frequency	%age	Rank
Top	11	22%	3
Middle	19	38%	1
Lower	4	8%	4
All	16	32%	2

## 3. Mobilink (PVT)

(Table # 3-C)

Levels	Frequency	%age	Rank
Top	9	18%	2
Middle	18	36%	1
Lower	5	10%	3
All	18	36%	1

In question # 3, table & figure represents that In PTCL out of 50 respondents, 38% of the respondents replied that Information System is more essential at all level in organizations. While 32% respondents replied that it is important at middle level, 20% of respondents replied it is important at top level and 10% replied it is important at lower level.

While table & figure 3-B) represents that in LTE out of 50 respondents, 38% of the respondents replied that Information System is more essential at all level in organizations. While 32% respondents replied that it is important at all levels. 22% of respondents replied it is important at top level and 8% replied it is important at lower level.

And table & figure represents that in Mobilink out of 50 respondents, 36% of the respondents replied that Information System is more essential at all level in organizations. While 36%

respondents replied that it is important at all levels. 18% of respondents replied it is important at top level and 10% replied it is important at lower level.

### **Weaknesses of the MIS department**

- There is lack of expert software engineers.
- Transactions are not updated at the time of occurrence.
- Research & Development unit of PTCL is not working properly due to insufficient budget.
- There is weak security system to secure the information from irrelevant persons.
- Accuracy of information is sometime doubtful.
- Some time weakness appears such as poor relational design, too much duplicated data, and no (appropriate) primary keys.
- Some time a Microsoft Access template database doesn't perfectly fit the company's needs.
- Some time problems appear 'on format' controls/VBA Code in reports because the developer doesn't know the SQL programming language.
- Less training in IT department

## **No of employees working in MIS department**

The policies of the ruling class based on privatization, downsizing, and restructuring have made life hell for the working class. On the one hand the rulers are throwing the workers into the quagmire of joblessness and poverty and on the other hand they are involved in massive corruption and looting. And in a continuation of this looting and plundering, they are planning to privatize the Pakistan Telecommunication Corporation Ltd. (PTCL). As a result, thousands of workers will lose their jobs and will be thrown out without any notice or benefits from this organization. The total number of employees at PTCL is **60,000 out of which 7,000** are on contract. Workers can retire after 25 years of service and in the case of the “golden handshake” it is a minimum 10 years.

According to the management of the organization, the introduction of computers and modern machinery is the main reason for downsizing. Computers can do four times the work that a worker can do. So, in the management’s view, more than 50 percent of the staff are surplus, although with downsizing less than 30 percent of workers are expected to lose their jobs. PTCL is definitely under pressure from international financial institutions to push forward with downsizing.

On one hand, the management is firing the old employees in the name of schemes like “golden handshake”, but on the other hand it is recruiting new staff on a daily wages basis. Daily wages workers are performing the same job as regular workers, but they receive less salary and work without any job security. The tenure of the PTCL employees union finished in April 2000. The application for new referendum had been filed but no date was finalized. Due to the absence of any C.B.A with any trade union in PTCL there was no pressure on the administration from workers and their representative bodies.

## **System development process**

System development process is a set of activities methods best practices and automated tools that are used to developed continuously improved information system and software in ptcl.

### **Problem Analysis:**

After I.T departments employees survey it is clear that the uses of that system is so difficult for lower level staff like clerical staff, and due to overload of IT work showing hanging problems. Video conferencing showing very bad image due to lack of modern technological Features and an other important problems are huge repairing and maintaining cost that is bearing by the IT department every month. That system is not providing proper support to the several IT projects of PTCL.

### **Solutions**

- The IT department arranges proper training programs are all employees of the IT department.
- Easily accessibility of all tools of system.
- Using modern technology.
- Using economical technology
- Providing technical training for IT department related people.
- Keeping system up to date on urgent basis.
- Urgent response on subscriber complains.
- Alternate services must be available in case of failure of any function of system.
- Provide a proper security system in system controlling departments.
- Provide separate login accounts to relevant workers.

## **Preliminary Investigation & Problem Analysis**

### **1. New Telephone Lines**

PTCL has planned to introduce the 350000 new telephone lines in 2000-01. This would meet the need of the new connection demand in the different regions including business areas.

### **2. Replacement of Old Lines**

The PTCL is planning to replace 220000 old EMD lines with new digital lines. This is done to eliminate the interruption problems and to make more efficient communication network.

### **3. Extension of Internet**

PTCL is planning to provide 150000 new connection of Internet in Pakistan within different region in 2000-01. This implementation is in advance stage.

### **4. Video Conferencing**

Developing the infrastructure of Video Conferencing in Pakistan and connecting this network internationally. This project is in its development stage. It will take lot of effort and cost to implement this project.

### **5. Fiber Optics Cable**

PTCL is installing a Fiber Optics Cables between Quetta and Shikarpur. It is a part of the plan of the PTCL to connect the whole country with very fast and accurate network.

### **6. IT Project**

PTCL is working on futuristic projects like Tele Housing and VOIP. The tele-housing project is a joint Venture with Akhter Computers, which will be started in near future. PTCL have received tender of VOIP now they are in the process of selecting a company with which they can start this project.

### **7. Universalization of Internet**

This project has started in July 2000; the main focus of the management in this project is to provide universal access to the Internet users. Users can access form any where in the world.

### **8. Up gradation of Old outside Network.**

EMD lines (Manual Exchanges) are converted into digital exchanges. This is done because of the fact that the digital exchanges have more accuracy than the manual exchanges. It also has less interruption in lines and effective in completion of the communication.

### **9. Better Management of Digital Transit**

All the exchanges are not used at their full capacity. The **PTCL** wants to utilize its exchanges at optimum level. For this reason they are providing connection within the 48 hours to increase customer base.

### **10. Improvement in the Response Time and Quality on 17, 18, 109.**

**PTCL** has improved its complaint receiving system and handling also. The company has an efficient system which links all information with headquarter for prompt cure.

### **Computerization of Directories Assistance System**

On the web site of **PTCL** ([www.ptcl.com.pk](http://www.ptcl.com.pk)) they have made a computerized directory for few selected cities of Pakistan. People can access these directories through Internet and find out the telephone numbers of person or institution they are looking for. They have to enter name or address or both to find out the telephone number.

### **11. Up Gradation of Customer Services Center**

The company is trying to provide better environment and polite staff for handling the customers. For this purpose they are planning to arrange training of staff especially frontline staff. It is also trying for improving in customer services centers and creating customer care culture.

### **12. Provision for of Diversity on Main Arteries**

The company is trying provision of diversity on main arteries for national and international circuits including these lines to mobile operators for interruption free service during breakdowns.

### **13. Hotline at Headquarter**

A hotline at headquarter of **PTCL** which is fully operational allows performance all the regions to be centrally monitored through a complaint system using 0800 toll free facility.

## **Requirement analysis Phase**

This research utilized the descriptive method in acquiring information for evaluation and analysis. The descriptive process of research was believed to be more suited in this kind of investigation because it seeks direct response from the respondents of the study.

This method ascertains the prevailing conditions in a particular setting and experiences in a group. Actually this method is essentially a technique of using quantitative description of the general characteristics of a group under study seeks answers to questions raised as to the real facts relating to existing conditions. It also provides information who, what, how, where and when of a study.

## **System Design Phase**

An institution's Information System should be designed to achieve the following goals:

- Provide an objective system for recording and aggregating information.
- Enhance communication among employees.
- Reduce expenses related to labor-intensive manual activities.
- Support the organization's strategic goals and direction.

## **Constructing & Testing new System**

### **METHOD AND TOOLS**

#### **Respondents of the study**

In this study, major group of respondents involved the employees of different organizations.

Researcher has to study the role of Information System in managerial success in the field of the telecommunication in government, semi-government and private sector. The organizations which researcher selects are Pakistan Telecommunication Company Limited, LT Engineering & Trade Services Limited and Mobilink. Researcher selected there head quarters, which are located in Islamabad and Hassanabdal.

#### **Sampling Procedure**

The sampling design used for this research is the Purposive sampling because researcher's main aim is to check the perception of respondents about role of Information System in management success.

The researcher distributed the questionnaire to the desired respondents in their offices. It took us to accomplish within 2 to 3 weeks to gather the data. But this collection of data is not easy because in organizations every one is busy and they have no much time for this activities but researcher thanks them very much for helping him in this project.

#### **Research Instrument**

For obtaining proper information, it is necessary that a questionnaire must be designed in such a way that it looks convenient to respondents to fill it easily in 2 to 4 minutes. For that purpose researcher develop a questionnaire. This questionnaire is a close ended and respondents were asked to check any one of the given alternatives following each question.



The survey questionnaire seeks the perception of the respondents with respect to the factors that influence the role of Information System in managerial success. The scale used for these questions was liker scale. This scale specifically utilizes the anchor of Strongly Agree, Agree, Indifferent, Disagree and Strongly Disagree. It is also convenient to researcher, when he apply a testing on it.

### **Statistical Tools**

The researcher used the following statistical tools in order to give clear and reliable analysis and interpretation of the data:

1. Frequency and percentage distribution was used to determiner the relationship of the perception.
2. Weighted mean was computed to establish the scores of the respondents for each question in the questionnaire. The formula is:

$$W_m = \sum W_i X_i / W_i$$

Where,

$W_m$  = Weighted mean.

$W$  = Weights.

$X$  = Frequency.

$I$  = Number of cases.

## **Implementation, Maintenance & Support**

The economic measure of Information system effectiveness, as the "conversion of Information system investment into real output" question in organizational paradigms where politics and conflict are important motivating factors. He found "re-distribution of power" to be an important impact of Information system implementation while other researchers have described the roles played by leadership and managerial control issues in Information system implementation decisions.

Information System's purpose is to improve the performance of the organization by improving the quality of managerial decisions. An effective information system collects, codes, stores synthesizes and present information to answer important operating and strategic questions. It is a major strategic source for monitoring environment changes, identifying competitive threats and assisting in the implementation, evaluation and control of strategy. PTCL understands the highly significant role of information technology in today's global business environment, and thus pays special attention to the implementation of IT in all of its departments. Every department has its own network system and database that provides increased communication and reliable information.

The importance of maintaining a consistent approach to the development, use, and review of Information systems within the institution must be an ongoing concern. Information system should have a clearly defined framework of guidelines, policies or practices, standards, and procedures for the organization. These should be followed throughout the institution in the development, maintenance, and use of all Information systems.

## SWOT ANALYSIS

### Strengths

- 1) Largest operational network and infrastructure within ICT (Information & Communication Technologies) segment.
- 1) An integrated Monopoly
- 2) Market leadership in Local loop, Wireless local loop (WLL) and Fixed telephony.
- 3) PTCL (Ufone) is market challenger in GSM segment
- 4) Ufone is performing well though Warid and Telenor are tough competitors. PTCL, Ufone's profitability increased by 49.2 percent to Rs 977 million in 1H/FY07 as compared to Rs 655 million in the corresponding period last.
- 5) Competitors still depend on PTCL network either directly or indirectly
- 6) Experienced Telecom Resources

### Weakness

- 1) Not been able to nurture its growth around customer services oriented strategy
- 2) Internal organizational and business processes issues
- 3) Monopolistic culture has further added to its complexities
- 4) Paknet, the internet service provider arm of ptcl continues to incur losses due to poor management and lack of network optimization
- 5) Ptel-v, the fixed wireless phone service is poor

- 6) Over employment & low productivity.
- 7) Slow decision making including external interferences.
- 8) Corporate culture akin to government departments.

### **Opportunities**

- 1) Low Teledensity of Pakistan.
- 2) Have vast infrastructure and real estate assets which can be leveraged further.
- 3) Global connectivity reliability has been improved. PTCL is expanding the long distance and infrastructure side through spreading out two sea-me-we submarine cables..
- 4) Partnership with new entrants in a deregulated environment.
- 5) Scope for efficient/cost effective operations.

### **Threats**

- 1) Increased competition in long distance continues to exert pressure.
- 2) VOIP use is increasing despite ambiguous and discriminatory policies
- 3) Exposure to market competition
- 4) Migration to Cellular Networks
- 5) Ability to Attract & Retain Quality Professionals
- 6) Reduction in International Settlement Rates

## **Conclusions**

In current era where information technology has been a revolution for marketplace and has greatly influenced the way of every field of life. Now companies rely heavily on innovations and technological changes in order to compete in a competitive environment.

Information System increases the communication among management levels. It leads the employees to perform their tasks more efficiently and effectively and it save the time and cost of firm.

Firms with weak information system skills are at a competitive disadvantage. Strengths in Information System allows firm to establish distinctive competencies in areas such as low-cost manufacturing and good customer services.

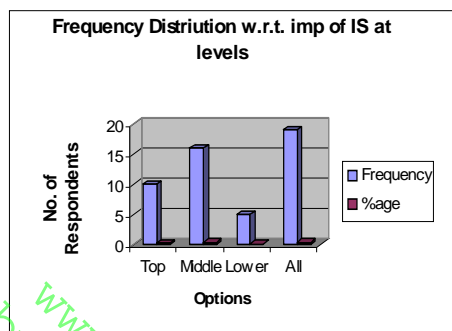
## Recommendations

- When the work overload occurs that causes the inefficiency in data processing. Information System begins to be applied to well structure tasks within individual processes for processing high volume data of daily operations by automating those tasks.
- Secondly, when there is the demand for linking and coordinating varied tasks to facilitate massive data flow and communication. Information System plays an important role in processing a variety of data or information, improving the efficiency in operational coordination and managerial control within and across organizations.
- Finally, when there is the demand for integrating business processes to cope with rapidly changing environment, Information System plays a vital role in processing high quality of data or information, integrating inter-related operational activities and adding sophistication to the decision-making process for operational and managerial control within and across the organizations.
- Provide an objective system for recording and aggregating information.
- Enhance communication among employees.
- Reduce expenses related to labor-intensive manual activities.
- Support the organization's strategic goals and directions.

## Reference / Resources

- Company's website - [www.ptcl.com.pk](http://www.ptcl.com.pk)
- Company Annual Reports
- Magazine Business Economist
- Google.com
- Economic survey of Pakistan
- Businessrecorder.com
- Security and Exchange Commission of Pakistan
- Kse.com
- Yahoofinance.com
- PTA Reports

## Annexes



### PTCL (Govt.):

(Table # 1)

Levels	Frequency	%age	Rank
Top	10	20%	3
Middle	16	32%	2
Lower	5	10%	4
All	19	38%	1

### LTE (Semi Govt.)

(Table# 3-B)

Levels	Frequency	%age	Rank
Top	11	22%	3
Middle	19	38%	1
Lower	4	8%	4
All	16	32%	2

### Mobilink (PVT)

(Table # 3-C)

Levels	Frequency	%age	Rank
--------	-----------	------	------



Top		9	18%	2
Middle		18	36%	1
Lower		5	10%	3

provided by [www.educatepk.com](http://www.educatepk.com) nishat academy Islamabad