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# **SWIFT ISP Local Loop: An Emerging Business Dimension for Local ISP Market in Pakistan**

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**CHAPTER # 01**

**PROBLEM AND ITS**  
**BACKGROUND**

## **1.1 INTRODUCTION:**

Society for Worldwide InterBank Financial Telecommunication (**SWIFT**) is a global community of financial institutions with its headquarters in La Hulpe, Belgium whose purpose is to enable interoperability between its members, their market infrastructures and their end user communities. With its establishment in 1973 by 239 banks in 15 countries, it developed a shared messaging platform for financial transactions with emphasis on security, reliability and availability. Presently, SWIFT have 7600 member financial institutions across 200 countries. Its scope of business is extended to Payments, Securities, Foreign Exchange, Treasury and Trade while reducing costs, improving automation and managing risk. As an industry-owned community, SWIFT at present is catering to traffic of over 2 billion messages/year with peak day traffic of over 10,000,000 messages on their network. [1]

SWIFT community is comprised of mainly Banks, Financial Institutions, Brokerage houses, Recognized Exchanges, Industrial Groups as customers whereas the pillars of the community are their Network Partners and lastly the Service / Business Partners. [1]

The Network Partners provide Point of Presence (POP) for SWIFT Belgium throughout the globe. These Network Partners basically become the first point of connection for a customer where they use STP (straight through processing) to transmit information to the SWIFT's core network. [1]

The Service / Business Partners complement SWIFT in installation, technical support for their proprietary software and application. These Service / Business Partners are also responsible for implementation of periodic changes / upgrades to the software / application. They also provide different solutions depending upon the requirement of typical customer. Some Service Partners also provides connectivity to SWIFT's core network using the Gateways. [1]

Being an industry owned community by 3000 banks, S.W.I.F.T. also connects other categories of non-bank financial institutions engaged in the securities industry, including:  
[1]

- Securities broker/dealers
- Investment managers
- Securities exchanges
- Central domestic securities depositories and clearing organizations
- Central cross-border securities depositories and clearing organizations such as Cedel and Euroclear
- Trust Companies and Fiduciary Service Providers
- Custody and Nominee Services Providers
- Registrars
- Transfer Agents
- Investment managers were granted full participant privileges at the June 1992, S.W.I.F.T. Annual General Meeting in Brussels. As participants, investment managers have the right to use the S.W.I.F.T. standards, access the S.W.I.F.T. network, and indirectly participate in setting the future direction of S.W.I.F.T.
- Securities Electronic Trade Confirmation (ETC) Service Providers, a new category of participants, were allowed to join the S.W.I.F.T. network as of June 1996.[6]

#### 1.1.1. SWIFT's Transition from X.25 to IP (Internet Protocol)

SWIFT network has migrated from X.25 to IP very lately all over the world. The migration started globally in 2001 and in our country August 2004. Due to migration to IP, SWIFT network became robust. Since IP runs over dozens of networks, it is now feasible for SWIFT to work with different kind of network topologies. [4]

Initially at the time of migration SWIFT Belgium introduced three kind of topologies and named them as Dialup, Dual-I and Dual-P.

#### 1.1.2. Dialup

Two Dialup connections will be used in this architecture, hence two modems. One will be used as primary connection and the other as backup. Again there is no router in this scheme and only a single VPN Box will cater to the two dialup links. [4]

#### 1.1.3. Dual-I

This is an infrastructure with one permanent connection which is supported with a Dial Back-up. In this architecture SWIFT proposed that there should be two VPN boxes, one for permanent connection and one as dial backup. A router will be used for permanent connection and a modem will be used for dialup line. [4]

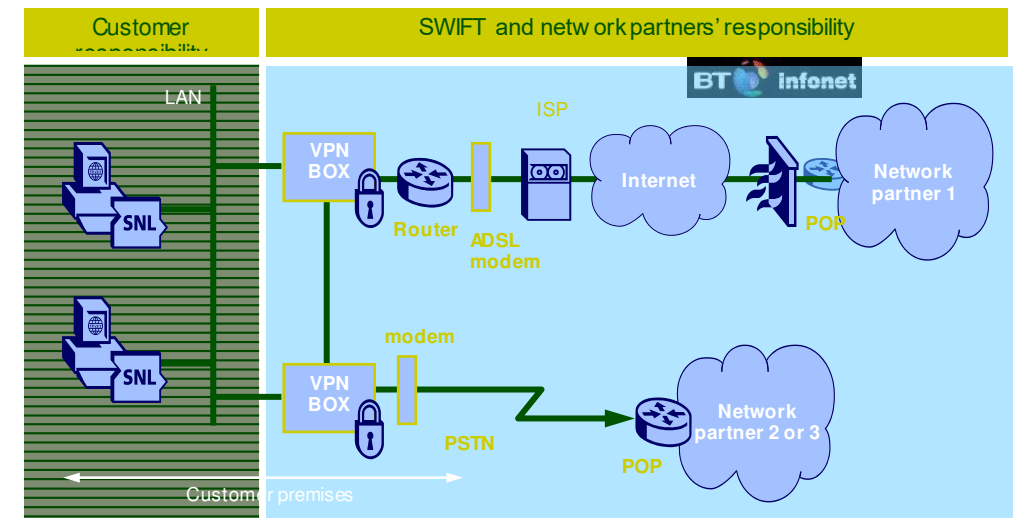
#### 1.1.4. Dual-P

This network architecture consists two permanent links to the SWIFT via Network Partner one as active and other as backup. There will be two routers installed at the customer site along with two VPN Boxes one for each permanent connection. This topology has so far not been adopted by any bank in Pakistan. [4]

#### 1.1.5. ISP – Local Loop (ISP – LL)

Since Internet runs over IP, SWIFT has introduced recently a new network topology which is nothing but a sophisticated extension and bundling of Virtual Private Network (VPN). The ISP–Local Loop, which is a permanent connection to SWIFT network using the permanent line as in Dual-I scenario and connect to a Network Partner through an Internet Service Provider. [2] [3] [4]

SWIFT recommends ISP–LL for dialup customers as a mean to achieve permanent connection while remain cost conscious and for Dual-I customer to switch from expensive topology to a cost effective architecture thereby a negligible performance slash. SWIFT also recommends that the countries having one or no network partner can now have the opportunity to shift from every time cross-border dial and heavy telephone tariff. Figure-4 would best depict the ISP–LL scenario. [2] [3] [4] [5]



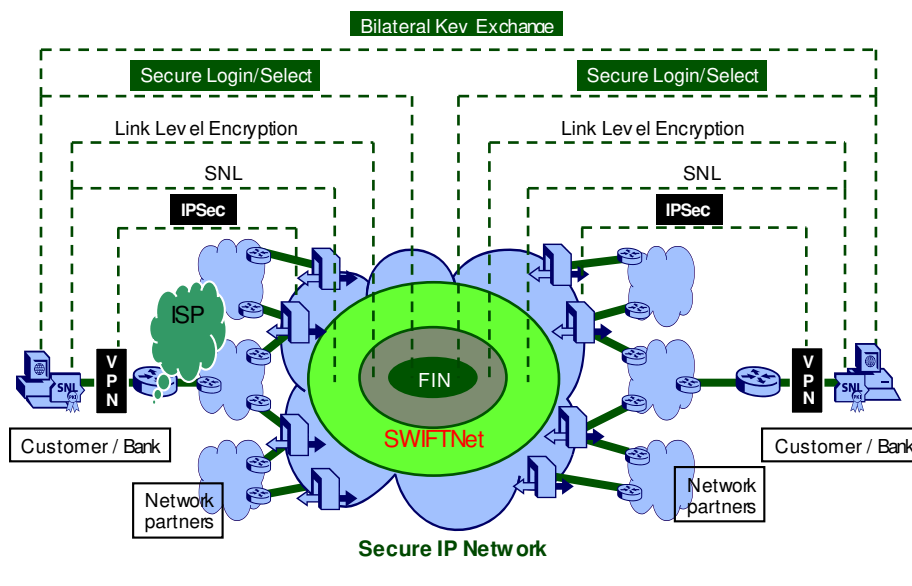
**Figure 1 The ISP-Local Loop [5] [6]**

The above figure clearly sets an ISP into the existing network of a Bank with SWIFT Belgium through their network partner without any disturbance to the network and without any breach of security. For this purpose BT Infonet the SWIFT's Network Partner for ISP-LL has provided fine integration schemes which will be discussed later. An ISP for the purpose of acquiring the market share of this product has to engage into an agreement with BT Infonet. The ISP would also need to sign SLA's with the banks in their country for their need of Last Mile connectivity. [2] [3] [4] [5]

Considering the banking industry as their prospective market for the product, the ISP's in developing countries could follow this new dimension of business that the emergence of a product which is cost effective would not only provide a fruitful business but also would enable them to join the international community of SWIFT.

### 1.1.5.a. SECURITY OF OVERALL SWIFT NETWORK

SWIFT will not compromise on security. The connection is as secure as any other connectivity option because it shares the same security components, provided and managed by SWIFT. Keeping in view the figure of overall SWIFT network and its security layers, the presence of a link in the overall chain that is not managed by SWIFT does not mean, however, that the reliability of the connection cannot be guaranteed. [5] [7]



**Figure 2 Overall SWIFT Network & its Security Layers [5] [6]**

The overall SWIFT Network and the layers of security that SWIFT has induced could be best understood by closely looking at the figure-8. In this global view of SWIFT's existing network it is clear that how an ISP could easily take the advantage of entering into an already established network without breaching any security layer. [2] [3] [4] [5]

The network has been tested by SWIFT Belgium before the launch of the product for any breach of security. The introduction of the product and induction of any ISP in the existing network do not violate following existing security layers of the Secure IP Network (SIPN) of SWIFT. [4] [5]

- 1.1 IPsec Tunnel
- 1.2 SWIFT Net Certificate
- 1.3 Link Level Encryption
- 1.4 Secure Login & Select
- 1.5 Bilateral Key Exchange

Nonetheless, the customers at whom the option is aimed consider the reliability sufficient for their needs, since their traffic volumes tend to be very low. In some cases, customers taking part in the pilot phase found that the reliability of the product was actually better than their previous method of connection. However, there is a dial backup in the active / standby mode to reactivate at the time of failure of the primary connection. [5] [7]

As there occur changes in the network architectures and access methods globally, SWIFT is also planning to introduce new security mechanisms. [1]

### 1.1.5.b. COST EFFECTIVENESS

Cost is the main derivative for the ISP-LL scheme to win the market. There is however, a negligible compromise on performance as compared to the Dual-I but the bandwidth that could be achieved using the ISP-LL architecture is sufficient for SWIFT messaging and moreover it is a permanent connection. The graph below gives an idea of the comparison of cost against functionality of these topologies. [2] [3] [4] [5]

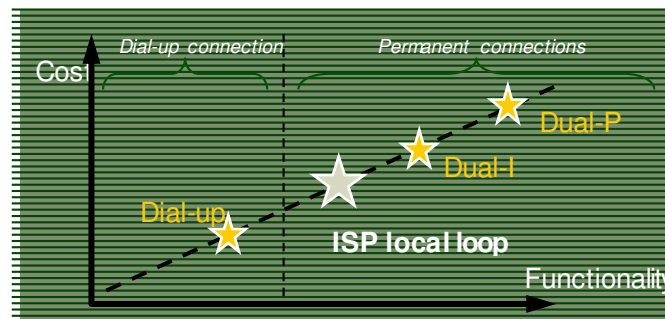


Figure 3 Cost v/s. Functionality [5]

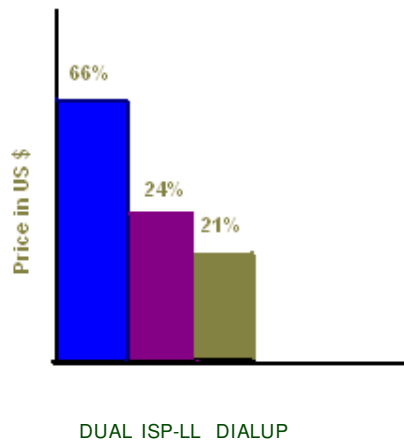


Following are the approximated recurring cost evaluations for different topologies. [4] [5]

- Dialup US\$ 1,000
- Dual-I US\$ 4,000
- Dual-P US\$ 7,000
- **ISP-LL US\$ 1,500**

Considering the cost that is very close in comparison to the Dialup while the solution is closer in performance with Dual-I, any bank that exists on a dialup solution will be happy to migrate to the ISP-LL architecture. Those banks that are already using Dual-I can save \$\$ against the negligible performance slash. For the banks in developing countries that have yet to start with SWIFT messaging solution this should be the appropriate time when the SWIFT network has expanded manifolds. [2][3][4][5]

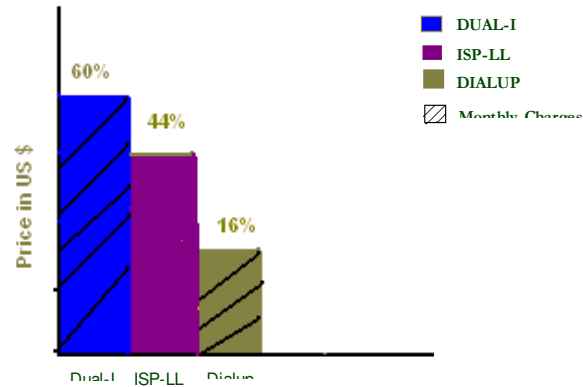
The comparison of recurring cost could be best understood by the following figure:



**Figure 4 Monthly Recurring Cost**

The ISP-LL is not only beneficial in terms of recurring cost but is also cheaper in implementation. [4][5]

The comparison can be derived from the following figure:



**Figure 5 Implementation Cost**

It should be noted in the above figure that solutions other than ISP-LL contains monthly recurring charges besides one time implementation cost.

## **1.2 PROBLEM STATEMENT:**

The problem is to create awareness in the ISP market of the country that they can target the strong financial industry as their market for this product. Considering the banking industry as the prospective market for the product, the ISP's in Pakistan could follow this new dimension of business that the emergence of a product which is cost effective can provide a fruitful business to them.

There are banks in Pakistan that are not on SWIFT messaging solution due to its heavy cost of hardware/software network and still rely on Telex. This is the right time for these banks to switch to standard global financial messaging solution.

## **1.3 BASIC HYPOTHESIS**

**H<sub>O</sub>:** Majority of the ISP's in Pakistan has no awareness about SWIFT ISP Local Loop.

**H<sub>A</sub>:** Majority of the ISP's in Pakistan has awareness about SWIFT ISP Local Loop.

## **1.4 SIGNIFICANCE OF STUDY:**

The product is attractive in terms of cost and forthcoming usage, that an ISP can easily market it by targeting the strong financial industry of the country. Since the ISP market of the country that can deploy is unaware of the product while banks that can use are aware of it, this study would create recognition of the product in the ISP market. By acquiring such product the banks in Pakistan could also scale their SWIFT services. This study would enable the product, the ISP market and the banking industry of Pakistan to produce well to the economy by stepping up in the field of information technology.

## **COST EFFECTIVENESS**

Considering the cost that is very closer to the Dialup while closer in performance with Dual-I, any bank that exists on a dialup solution will be happy to migrate to the ISP-LL architecture. [2] [3].

## **SECURITY**

SWIFT will not compromise on security. The connection is as secure as any other connectivity option because it shares the same security components, provided and managed by SWIFT.

## **1.5 SCOPE:**

The study enables the ISP's of Pakistan to capture the banking industry of the country more specifically banks of Karachi as their target market. SWIFT's new product, ISP-LL could be scaleable to rural as well as urban areas of the country. ISP's could launch the product to the banks which are existing customers of SWIFT as well as to those which are not.

## **1.6 DELIMITATIONS:**

Since the product is at infancy stage it is rather unpredictable to comment on the future prospect however the indications that the product provides a clear edge that it will sweep the target market. In case of launch of a competitive product by SWIFT Belgium or by announcing certain waivers on the existing product the growth of the ISP-LL may suffer.

## **1.7 DEFINITIONS/ABBREVIATIONS:**

SWIFT:	Society for Worldwide InterBank Financial Telecommunication.
ISP-LL:	Internet Service Provider (Local Loop)
SIPN:	Secure IP Network
POP:	Point of Presence
FIN:	Financial Message
STP:	Straight Through Processing
VPN:	Virtual Private Network
SLA:	Service Level Agreement
IP:	Internet Protocol
LAN:	Local Area Network
PSTN:	Public Switched Telephone Network
ISDN:	Integrated Services Digital Network
SNL:	SWIFT Net Link
ADSL:	Asynchronous Digital Subscriber Line
M-CPE:	Managed Customer Premises Equipment
PPP:	Point-to-Point Protocol
PPPoE:	Point-to-Point Protocol over Ethernet
NAT:	Network Address Translation
HTTP:	Hyper Text Transfer Protocol
TCP:	Transmission Control Protocol
UDP:	User Datagram Protocol
IPSec:	Internet Protocol Security

**CHAPTER # 02**

**RESEARCH METHOD AND**  
**PROCEDURES**

## **2.1 PURPOSE OF STUDY:**

The purpose of conducting this study is to exploit the cost effectiveness and performance kinds of features of the product to create awareness in the ISP market of the country that they can target the strong financial industry as their market for this product.

This study is conducted by considering both industries (ISP's and Banks) ready to take the seed of SWIFT's ISP-LL and cultivate prosperous economy.

## **2.2 TYPE OF INVESTIGATION:**

The study is Exploratory in nature because the purpose of the study is to investigate the pros n cons of different marketing strategies of a physically existing product. This product has been launched by an international society SWIFT and the awareness of the product in the local ISP market is negligible, so this study will explore the new business dimension to the ISP market of Pakistan.

## **2.3 STUDY SETTING:**

Study has been conducted in the field settings.

## **2.4 TIME HORIZON:**

This research has been conducted in the time period of 4 months and the validity of the report is approx. 6 years.

## **2.5 RESPONDENT OF THE STUDY:**

The respondent of the study were the Internet Service Providers (ISP's) of Pakistan in Karachi. And the sample size was 6 major ISP's.

- Cyber Net
- Supernet
- FASCOM
- Paknet
- Netsol
- Gerry's Net

## **2.6 RESEARCH INSTRUMENTS:**

The type of study is exploratory in nature therefore secondary data is easily available on internet and magazines while the primary data will be gathered by means of interviews as the target market is unaware of the product ISP-LL therefore the instrument used will be un-structured interviews that will be conducted from the respondents.



## **2.7 SOURCE OF DATA:**

The source of data will be primary as well as secondary.

### **Primary Source:**

Primary research has been conducted in order to determine the research results the data collection method is in the form of un-structured interviews.

### **Secondary source:**

The secondary data has been gathered by means of electronic mails, Internet and magazines.

## **2.8 TREATMENT OF DATA:**

Data is treated in following manner

- Tables and Figures.
- Analysis of findings.
- Hypothesis testing.

CHAPTER # 3

**REVIEW OF LITERATURE &**  
**STUDIES**

### **3.1 <sup>1</sup>LOCAL LITERATURE:**

#### **Scenario of Internet Market in Pakistan as of 2005**

##### **Customer Segmentation**

Analysis of the Internet industry shows that customer profiles vary from city to city. In Islamabad, which has a high literacy rate and a home to number of diplomats and IGO / NGO workers, who are exposed to state of the art technologies, Internet is a “must have” Service. Comparatively speaking, the profile of customers in Lahore and Karachi varies. Broadly speaking, it is estimated from our surveys that about:

82% of all Internet subscribers are business users in the sense that these users use Internet for aid in performance of their business functions in one way or another. 18% are home based users who are professionals, students, academics, Internet Enthusiasts, people who are next to kin live abroad.

##### **Business users:**

32% are corporate customers which include Multinational Companies and large-scale local business groups. This segment is responsible for generating the most traffic on their Internet accounts and is most likely to subscribe to other value added services as and when they are made available for value addition to their own businesses.

12% customers are medium scale local businesses for whom Internet provides a medium to cut down on communication costs and are finding it a replacement of expensive fax / phone (domestic as well as international).

17% of the business comes from the category of diplomatic missions, development agencies, NGO’s, IGO’s, International aid agencies.

12% of the customers are Government offices, Public sector enterprises and other departments.

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<sup>1</sup> [www.ISPAK.org](http://www.ISPAK.org)  
(Internet Service Provider Association of Pakistan)

16% of the subscriber base; interestingly, is composed of companies / organizations dealing in Software, IT industry, computers, software, networking and other related areas. They have a high degree of awareness of Internet and allied services and are also responsible for promoting this activity among their clients.

10% of the customer base comes from educational institutions and other agencies related to education and training.

(The above breakdown is valid for Islamabad/Rawalpindi twin cities)

### **Price Consciousness:**

It is observed that the non-business customers are highly conscious on price. The corporate are quality conscious. Other than the high-end segment, the other segments of customer market react favorably to service pricing.

### **Subscription to Multiple ISP's**

Almost 85% of all Internet subscribers hold accounts with more than one service provider and about 40% subscribe to 3 services. One of the reasons for this practice is that the infrastructure available with the ISP's for Internet delivery to end users is highly restricted and customers are usually experiencing problems with accessing their services. Some of the service providers have experimented with modem ratios of 1:10; but this ratio quickly erodes given that the market is still growing and the infrastructure availability by PTCL to these ISP's cannot keep pace with the subscriber growth and a never ending spiral exists in service provisioning.

As mentioned above, the market; especially the medium to low end segment is extremely price conscious. This is the reason why PTCL - by far the largest network provider (11,000 subscribers) with presence in 12 cities is still able to maintain this customer size as it provides the cheapest service less than ½ the price of its closest competitors and although the quality of service leaves much to be desired, it is still running a long wait list of potential subscribers. In a market which is driven by volumes globally, this is a very crucial aspect which needs to be considered if any competitive service is to be provided.

### **Average Revenue**

In terms of revenues, our survey has concluded that the largest service providers (including PTCL) in Islamabad and Lahore are getting average per subscriber revenues in the neighborhood of Rs. 600 per month (~ US\$ 12). However, the top 32% corporate users generate average revenue in excess of US\$ 100 per month.

Based on our surveys, we have concluded that the market dynamics suggest that the time may be just about right for introduction of flat rate services as more are in demand. Karachi is ahead in this regard as many ISP's have started providing flat rate packages of < Rs. 2000 a month. However, service pricing for flat rate services is an issue which needs to be handled carefully because one such attempt by a leading service provider (IBM) could not take off in the market and landed right in their face when problems started to snowball, specially on the infrastructure availability issues to the subscribers. The Internet market is growing at a reasonable pace and is expected to offer exciting opportunities to existing and potential Internet users in the months to follow.

### **Market Size and Growth**

Internet services have shown very healthy growth and the market size continues to expand. Estimates show that the Internet subscriber base grew by 100% in 1997 and 1998 and is expected to keep growing at a rate of 80% until 2002 following which will level off to 60% growth thereafter. The current population of Internet users is about 85,000.

Pakistan Telecommunication Company Ltd. - the dominant telecommunications carrier expects that the size of market will swell to 350,000 subscribers by 2001 and is preparing an infrastructure to address at least 50% of these subscribers. A turnkey system for first phase of this infrastructure planned for 50,000 subscribers (5000 on-line simultaneously) is already under deployment. The growth in Internet is related to the growth in PC enabled households / offices and the growing exposure about this important medium. According to figures made available by the Board of Investment (BOI), Govt. of Pakistan, the present demand for PC's in Pakistan is approximately 123,000 units, growing at over 35% per annum. The key reasons for this are the growth rate of population, education, current government computer promotion programs, exposure of

general population to PC's and proliferation of computer education institutes. However, physical surveys conducted in Rawalpindi / Islamabad twin cities reveal that the actual number of PC's sold in the year 1998 was over 36,000. The economy of Rawalpindi / Islamabad is much smaller than either Lahore, Karachi, Faisalabad and other commercial cities and thus the BOI figures for demand appear to be very conservative. The actual demand of PC's appears to be about 225,000 units per annum and these PC's are mostly Internet ready, requiring none or minimum effort to enable sale of Internet service to a new user.

### **BOI Estimates**

Year Ending June-30	Demand for PCs	Aggregate Internet Users
1999-2000	90,000	26,500
2000-2001	122,000	52,000
2001-2002	165,000	95,000
2002-2003	223,000	170,000
2003-2004	300,000	306,000
2004-2005	405,000	550,000

The market is currently served by about 60 active ISP's all over the country with over 35 in Karachi alone (80 ISP's have been licensed to date). Some of the large ISP operations are:

#### **Name of ISP Cities of Operation**

1. CyberNet Karachi
2. Comsats Karachi, Lahore, Islamabad, Peshawar, Faisalabad
3. BrainNet Lahore, Sialkot, Peshawar, Multan
4. IBM Karachi, Lahore.
5. PTCL 12 cities
6. SuperNet Karachi, Islamabad, Lahore.
7. Compunet Islamabad, Karachi
8. Apollo Islamabad
9. Fascom Karachi
10. POL Lahore, Islamabad
11. Pi Communications Karachi

The secondary market which is fuelling further growth in Internet is that of IT services. According to recent estimates, there are about 300 software houses based in Pakistan busy in developing and exporting software in areas as diverse as Database management, Internet applications, E-commerce, Y2K tools, CAD/CAM management systems. Infact, the fields in which these companies are involved are virtually unlimited to say the least and more opportunities are being thrown open to them every passing day as their skills, potential and strategic advantages are getting accepted in major software markets around the world including but not limited to USA, UK and the rest of Europe, South Africa, Japan, Australia to name a few important countries where most of the products are being exported. With growing size of IT services market, the Internet activity is likely to expand even further.

The use of Internet services has tremendous un-tapped potential in traditional business, education, research, industry, government and other areas. In recent years, more and more awareness has been accorded to these areas and provisioning of high speed, reliable, secure and low cost data communication / Internet services have become an important segment of today's telecommunication business. The Government of Pakistan is also undertaking many initiatives to add impetus to the IT / Internet related activity.

### **Growth in Internet Traffic:**

According to data obtained from PTCL and private sector ISP's, the volume of traffic generated by Internet users is rising and despite best efforts undertaken by ISP's to expand their capacity to the Internet backbone by increasing their IPL's, the capacity gets consumed very quickly and an endless chase continues.

The following table shows an indication of the aggregate International bandwidth that will be under utilization of ISP's in Pakistan in the coming years for Internet connectivity to the global Internet backbone.

### **Year International Aggregate**

Bandwidth Added.

1998 3008 kbps 3392 kbps (Actual)

1999 5312 kbps 8704 kbps (Actual)

2000 1152 kbps (upto Mar '99) 9856 kbps (Actual, upto March '99)

2001 10 Mbps 20 Mbps (6 Mbps by PTCL Internet)

2002 12 Mbps 32 Mbps

2003 13 Mbps 45 Mbps

2004 45 Mbps 2 x 45 Mbps (Market opens to competition)

### **Target Market.**

The following major market segments exist in the country for Internet services.

1. Government departments
2. Banks & Insurance companies.
3. Trading companies
4. Small and medium sized companies
5. Courier companies
6. Professionals
7. MNC's and Corporate users
8. Students
9. Home / Recreational users

### **Competition Issues:**

The Internet services market is very competitive in Karachi, and the competition is likely to intensify in the future. The current and prospective competitors include many large Companies that have substantial market presence and financial, technical, marketing and other resources. The competition comes from the following major categories of companies:

- (i) local ISPs, (Toughest competition as many local ISP's are well established in



Lahore, Islamabad and Karachi)

(ii) national and regional ISPs (COMSATS, Brain and others in planning stages)

(iii) nonprofit or educational ISPs (SDNPK is likely to be a major source of competition)

(iv) national telecommunications company - PTCL

(v) Major industrial, media, commercial and other groups which are eyeing entry into ISP business.

The consolidation of existing ISPs with or into larger entities, or entry of new entities into the Internet services market, would likely result in greater competition. The ability of competitors to bundle services and products with Internet connectivity services could place them at a significant competitive advantage. In addition, competitors in the telecommunications industry may be able to provide members with lower communications costs for their Internet access services, reducing the overall cost of Internet access and significantly increasing pricing pressures.

In order to compete successfully in the Internet services market, a number of factors will have to be considered such as:

- Strong market presence
- Adequacy of subscriber numbers
- Technical support services
- Capacity
- Reliability and security of network infrastructure
- Ease of access to and navigation of the Internet
- Pricing policies
- Competitors and its suppliers;
- Timing of introductions of new services by the competitors and its response
- Ability to support existing and emerging industry standards
- Industry and general economic trends.

## **3.2 FOREIGN LITERATURE:**

As given by “SWIFT Magazine”[1][2][3][4][7]

### **ISP local loop generally available – Remote SWIFT users just got closer**

Following a successful pilot phase involving over 20 SWIFT customers, the ISP local loop is now available. The connectivity option caters to the needs of members in countries with no choice of local Network Partner. At present, they typically use a dial-up cross border or leased line, which can be expensive and occasionally unreliable. Using ISP local loop, a SWIFT Network Partner is able to use a local Internet Service Provider for connectivity between the nearest access point and the SWIFT member’s site. The option increases choice, reduces cost and facilitates the growth of the SWIFT community.

#### **Increased choice and reduced cost**

SWIFT customers that have participated in the ISP local loop pilot stage are pleased at the increased choice and reduced cost provided by the option. “The ISP local loop is a very welcome initiative from SWIFT” says Mohamed Karim Mounir, IT Manager, Banque Centrale Populaire in Morocco “it means we now have a choice between two Network Partners. In the past, we either had to use the sole local Network Partner or incur the cost of an expensive international private leased line.”

#### **Security and reliability**

SWIFT will not compromise on security. The connection is as secure as any other connectivity option because it shares the same security components, provided and managed by SWIFT. The presence of a link in the overall chain that is not managed by SWIFT does mean, however, that the reliability of the connection cannot be guaranteed. Nonetheless, the customers at whom the option is aimed consider the reliability sufficient for their needs, since their traffic volumes tend to be very low. In some cases, customers taking part in the pilot phase found that the reliability of the ISP local loop was actually better than their previous method of connection: “We previously relied on an international phone line for our connectivity,”

comments Pierre Berne, IT Department Director, Banque Nationale de Credit in Haiti “not only was this a relatively costly option, it was not always reliable. The ISP local

loop option allows us to significantly reduce our telecoms costs and has proved more reliable than the cross-border line we used before.”

“We were pleased to take part in the pilot program for ISP local loop,” concludes Jan Bolman, Departmental Head of ICT at Centrale Bank van Suriname. “The set-up was relatively painless, with good support from both SWIFT and our Network Partner. The ISP local loop connection was up and running within a couple of weeks. We’re enjoying significant improvement in the stability of the connection to SWIFT as a result.”

### **ISP local loop key benefits**

- **Increased choice**

By providing a choice of network connectivity options, the ISP local loop enables you to decide exactly which type of connection most accurately meets your business needs.

- **Reduced cost**

Savings will vary from customer to customer, but case studies indicate that an ISP local loop could reduce your total network connectivity cost by 75% if you are currently using a cross-border line. By using an ISP local loop instead of your single local Network Provider, you could save 20-25% of your network connectivity costs.

- **Expanded reach**

By increasing choice and reducing cost, ISP local loop facilitates the continued growth of the SWIFT community, increasing the number of your potential correspondents.

**With SWIFTNet Accord, EADS reduces manual intervention for confirmation matching by 90%.**

### **Need for automated confirmation matching**

EADS has one of the biggest corporate FX portfolios in Europe – with an FX hedge portfolio in excess of USD 42 billion in 2003 and annual net exposures of USD 10 billion - and was keen to reduce the related transaction risk, in particular via its deal confirmation process. In the past, EADS confirmed its FX and Money Market transactions almost exclusively using faxes. Checking confirmations was very time-consuming as the information was not formatted. Manual matching of sent and received faxes took between an hour and a half and two hours daily. Errors were potentially very expensive. A single error could cost tens of thousands of euro. EADS needed a confirmations process which would improve the quality of the information, increase the speed of matching and reduce error rates. The adoption of standardized SWIFT messages and industry practices paved the way to the ultimate objective - the automation of EADS' confirmation matching. In addition, EADS also needed a low-cost communication infrastructure that would enable the company to process deals with any counterparty around the world.

### **A single solution provides multiple benefits**

EADS chose SWIFTNet Accord because it provides:

A low cost solution – “Using a centralized tried and tested matching service such as SWIFTNet Accord is far more cost-effective than buying, deploying and operating a matching system in our own back office.” confirms Drabert. Automation – Automating matching using SWIFTNet FIN and Accord eliminates the risk of making mistakes, saving time and money. EADS has reduced manual intervention by 90 percent and can now concentrate on cases that do not match due to misunderstandings between parties. Global reach – SWIFTNet Accord allows matching of exchanged confirmations with all counterparties, irrespective of whether they are SWIFT users. By using SWIFTNet Accord, EADS has the confidence of a system that guarantees correct matching results.

Operations staff, therefore, does not have to worry about their counterparties' matching methods.

A single supplier – SWIFT provides 24/7 world-class support via a single point of contact for all SWIFT products and services. Dealing with the same supplier, SWIFT, for services such as messaging and matching which are tightly integrated is a key advantage for EADS and was an additional reason to use SWIFT. Light integration – EFiS successfully managed the end-to-end implementation of the project within three months. EFiS shares the common standardised SWIFT infrastructure among several entities using different SWIFT services. “We have deliberately chosen an indirect connection via EFiS,” explained Ismael Aitamer, EADS back office. “We operate a light affordable infrastructure with a small footprint.”

SWIFT's centralised solution implemented by

German Service Bureaux Since December 2003, EADS has confirmed its FX and Money Market transactions via SWIFT MT 300s and MT 320s over SWIFTNet FIN. SWIFTNet FIN users exchange structured financial data worldwide securely, cost-effectively and reliably. FIN messaging standards have become the de facto financial communication standard for exchanging financial data. Once EADS was satisfied it could send confirmations reliably over SWIFTNet FIN, it wanted a matching functionality. EADS opted for a centralised model and selected SWIFTNet Accord, SWIFT's centralized confirmation matching system. “The total cost of ownership for developing an in-house matching system was too expensive compared to SWIFT's centralised solution,” says Drabert. EFiS, a SWIFT Service Bureau in Germany, was appointed to manage the connectivity, integration, and end-to-end implementation processes.

\* EADS' confirmations are submitted to the SWIFT interface managed by EFiS;

\* SWIFTNet FIN then sends the confirmations to the counterparties;

\* SWIFTNet Accord copies these confirmations in real time in order to effect the matching process.

### **3.3 AREAS FOR FURTHER STUDIES:**

Researchers are invited to further explore the statistics as to how the ISP's would acquire the share of their target market.

In case of a subsequent product launch by SWIFT or change in BT Infonet as Network Partner, what would be the suffering to the product and its derived business.

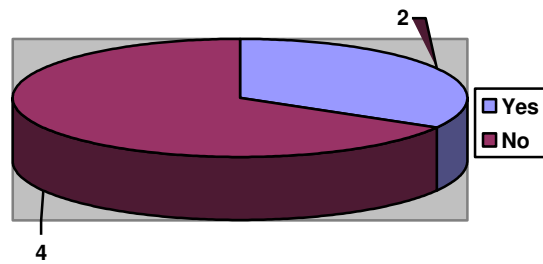
CHAPTER # 4

**PRESENTATION ANALYSIS**

## 4.1 ANSWERS TO THE QUESTIONS

Q-1. Do you know “what is SWIFT”?

CyberNet	Supernet	FASCOM	Paknet	Netsol	Gerry's Net
Yes	Yes	No Idea	No Idea	No Idea	No Idea



When asked about what is SWIFT, only two of the six ISP's answered in Yes and rest of the four ISP's answered No which shows that most of the ISP's are unaware about the SWIFT community.

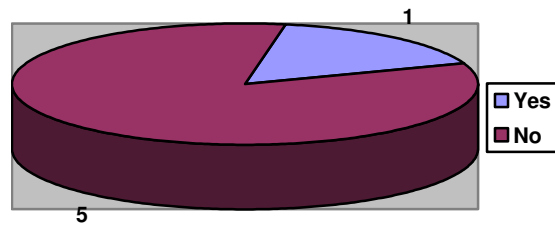
*CyberNet* answered that SWIFT is a community of financial institutions.

*Supernet* answered that it is a global standard of financial messaging with different network partners around the globe.



Q-2. If yes what is the service or product currently used by you?

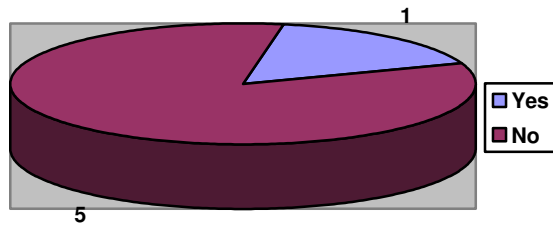
CyberNet	Supernet	FASCOM	Paknet	Netsol	Gerry's Net
None	Using Dual I	None	None	None	None



After questioning about the service or product of SWIFT currently used by ISP's five out of six answered No only *Supernet* replied in Yes that is because it is in contract with SWIFT for its Dual-I product.

Q-3. Which services or products are provided by SWIFT?

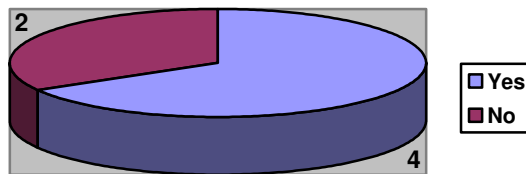
CyberNet	Supernet	FASCOM	Paknet	Netsol	Gerry's Net
No Idea	Dual I	No Idea	No Idea	No Idea	No Idea



Since only two of the ISP's knew about the SWIFT and in between two of them only one that is *Supernet* is taking advantage of the service or product offered by SWIFT and rest of the ISP's are still unaware.

Q-4. Are you aware that how banks communicate with each other for financial messaging?

CyberNet	Supernet	FASCOM	Paknet	Netsol	Gerry's Net
Yes, through SWIFT and TELEX	Yes, through SWIFT	No Idea	Yes, through TELEX	No Idea	Yes through TELEX and EMAIL



When asked about how banks communicate with each other four ISP's responded they knew about it and two of them responded in no idea there responses were as follows:

*CyberNet* has an awareness that the banks communicate with each other through SWIFT and TELEX.

*Supernet* which is currently the member of SWIFT community has knowledge of inter banking financial messaging.

As *Paknet* has benefit of secondary leverage of PTCL that's how they are aware of the technology TELEX through which banks communicate with each other.

*Gerry's Net* knows that banks communicate with each other through TELEX and email.

*FASCOM* and *Netsol* are unaware of the technologies through which banks communicate with each other in term of financial messaging.

Q-5. What is your strength over VPN?

<b>CyberNet</b>	<b>Supernet</b>	<b>FASCOM</b>	<b>Paknet</b>	<b>Netsol</b>	<b>Gerry's Net</b>
Comprehensive VPN Solutions throughout the country	VPN Solutions available	VPN is available in major cities of Pakistan	We provide VPN throughout the country	Comprehensive Architecture	Comprehensive Architecture

As *Cybernet*, *Gerry's Net* and *Netsol* are the premium ISP companies of the country which provides comprehensive VPN solutions throughout the country so it will be helpful to these companies for acquiring new product of SWIFT.

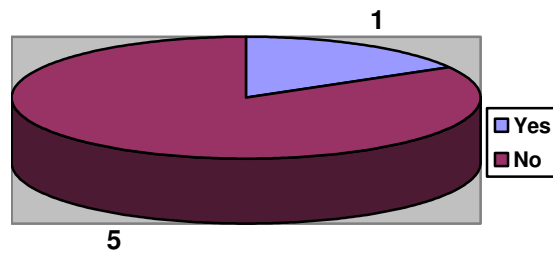
As *FASCOM* is only operating in major cities of the country like Karachi, Lahore and Islamabad so its strength over VPN is limited only in major cities.

As *Paknet* is the business unit of PTCL, providing VPN solutions throughout the country to various ISP's.

While *Supernet* is the only ISP Company which is currently the member of SWIFT has VPN solutions.

Q-6. Are you aware of the SWIFT's product ISP-Local Loop?

CyberNet	Supernet	FASCOM	Paknet	Netsol	Gerry's Net
No Idea	Little awareness of ISP-Local Loop is there but can not go for any other product except Dual-I	No Idea	No Idea	No Idea	No Idea



When asked about the awareness of the SWIFT's product ISP Local Loop the responses were as follows:

Only *Supernet* has the little knowledge of ISP Local Loop as *Supernet* is the existing member of SWIFT.

But all the other major ISP Companies are still unaware about SWIFT ISP Local Loop.

Q-7. What services do you provide?

<b>CyberNet</b>	<b>Supernet</b>	<b>FASCOM</b>	<b>Paknet</b>	<b>Netsol</b>	<b>Gerry's Net</b>
Internet Connectivity (Corporate / Individual / Prepaid) Solutions and Equipment, Contracting, Installation, Maintenance, LAN, WAN and MAN	Internet Connectivity (Corporate / Individual / Prepaid) Solutions and Equipment, Contracting, Installation, Maintenance, LAN, WAN and MAN	Internet Connectivity (Corporate / Individual / Prepaid) Solutions and Equipment, Contracting, Installation, Maintenance, LAN, WAN and MAN	Internet Connectivity (Corporate / Individual / Prepaid) Solutions and Equipment, Contracting, Installation, Maintenance, LAN, WAN and MAN	Internet Connectivity (Corporate / Individual / Prepaid) Solutions and Equipment, Contracting, Installation, Maintenance, LAN, WAN and MAN	Internet Connectivity (Corporate / Individual / Prepaid) Solutions and Equipment, Contracting, Installation, Maintenance, LAN, WAN and MAN

Answer to this question was elaborated from the secondary data available, all the major ISP's provides similar services which includes:

- Internet Connectivity

The main purpose of ISP is to provide internet connectivity to its users.

- (Corporate / Individual / Prepaid) Solutions

These ISP's provide corporate solutions through VPN networks and also allow the individuals to surf on internet through postpaid and prepaid (scratch cards) connections.

These ISP's also provides different services to its corporate users like banks and other financial institutions which includes;

- Equipment Maintenance (Hardware maintenance)
- Contracting Maintenance (Contract base services)
- Installation Maintenance (Software and hardware installation)
- LAN (Local area networking), WAN (Wide area networking) and MAN (metropolitan are networking)

Q-8. What services do you provide to Banking Sector?

<b>CyberNet</b>	<b>Supernet</b>	<b>FASCOM</b>	<b>Paknet</b>	<b>Netsol</b>	<b>Gerry's Net</b>
Corporate Internet Connectivity	Corporate Internet Connectivity and SWIFT Dual-I Technology	Corporate Internet Connectivity	Countrywide Corporate Backbone	Corporate Network Backbone	Corporate Internet Connectivity

As shown in the results

*Cybernet*, *FASCOM* and *Gerry's Net* provide corporate internet connectivity all over the banks of Pakistan.

*Netsol* provides corporate network backbone to the banks of Pakistan.

*Paknet* has a countrywide corporate backbone enabling them to facilitate banking sector of the country easily and economically.

Only *Supernet* provides corporate internet connectivity as well as SWIFT's Dual-I technology to the banks.

Q-9. How you market your product/Services?

<b>CyberNet</b>	<b>Supernet</b>	<b>FASCOM</b>	<b>Paknet</b>	<b>Netsol</b>	<b>Gerry's Net</b>
Through advertising, sponsoring concerts, approaching corporate executives	Through advertising, launching schemes on national holidays, approaching corporate executives	Approaching corporate executives	Approaching corporate executives	Approaching corporate executives	Approaching corporate executives

*Cybernet* advertised their product through media for general public and personal selling strategies for corporate executives it also market their product through sponsoring social activities like Concerts and TV shows.

*Supernet* use advertising for their product /services and launch different schemes on different occasions, they also approach the corporate executives to market their product/ services.

*FASCOM, Netsol, Gerry's Net* and *Paknet* use direct selling strategies to approach the corporate executives and spend low budget on advertising.



Q-10. What strategies you make to handle business expansion?

<b>CyberNet</b>	<b>Supernet</b>	<b>FASCOM</b>	<b>Paknet</b>	<b>Netsol</b>	<b>Gerry's Net</b>
Budget Allocation, ROI Analysis and Cost & benefit analysis	Budget Allocation and Cost & benefit analysis	Budget Allocation and Cost & benefit analysis	Infrastructure already available	Budget Allocation and Cost & benefit analysis	Budget Allocation, ROI Analysis and Cost & benefit analysis

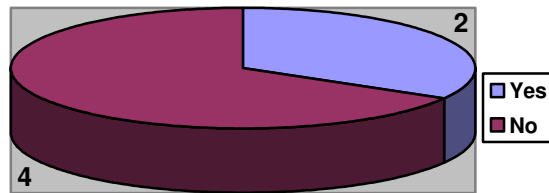
For business expansion *Cybernet* and *Gerry's Net* use Return on Investment and Cost & Benefit Analysis and Allocate budget on the basis of these analysis.

*Supernet*, *FASCOM* and *Netsol* use Cost & Benefit Analysis and allocate budget on the basis of these analysis for the expansion of business.

Where as *Paknet* is supported by PTCL, ensuring them a quality infrastructure for the business expansion.

Q-11. Using ISP-Local Loop how can you capture your target market (banks)?

CyberNet	Supernet	FASCOM	Paknet	Netsol	Gerry's Net
We have good VPN architecture so ISP-Local Loop can be handled	We cannot enter into any other product except Dual-I	No Idea	No Idea	No Idea	No Idea



When asked about the target market and product for that particular target market (Banks) the responses were:

**Cybernet** believe that they can capture their target market because of the good VPN architecture that can easily support ISP-Local Loop.

**Supernet** cannot enter into any other product because they are already in contract with SWIFT for Dual-I.

**FASCOM, Paknet, Netsol** and **Gerry's Net** have no idea because of unawareness about the product.

CHAPTER # 5

**SUMMARY OF FINDINGS,**  
**CONCLUSION,**  
**RECOMMENDATIONS**

## **5.1 SUMMARY OF FINDINGS:**

The ISPs in Pakistan are mostly unaware of the products and sometimes even of SWIFT, as four of the major ISP's were unaware about SWIFT altogether and in the remaining two ISP's only one knew about the SWIFT product partially of being in contract with SWIFT. In fact, very few ISPs in the city have comprehensive knowledge of SWIFT's network neither they have the awareness of SWIFT's products.

When asked from the ISP's about the main target market of SWIFT (i.e. Banks) and its awareness about SWIFT among the banks only two ISP's knew about the communication between banks by means of SWIFT the remaining four replied in no idea or through TELEX. All of the major ISP's have good network infrastructure of VPN and nearly all ISP's provide VPN solutions, hence ensuring the ISP's of easy adoptability of ISP-LL as it is a form of VPN. Since ISP's main role is providing VPN and other network solutions and ISP-LL is a form of VPN,. Therefore ISP's can easily take up the product and sweep their target market.

Based on the findings it is clear that major ISP's are still unaware or have negligible knowledge about SWIFT ISP-LL, Hence given sample of ISP's proving Null hypothesis that Majority of the ISP's in Pakistan has no awareness about SWIFT ISP-Local Loop.

## **5.2 ALTERNATIVES TO SWIFT SOLUTION:**

In fact there is no alternative, SWIFT born due to automation of Telex.

- Other channels i.e. Fax, e-mail are insecure.
- Money transfer solutions are there such as; Western Union and FedWire etc. but they are limited to money transfer only.

SWIFT is the comprehensive solution for all financial telecommunications.

### **5.3 CONCLUSION**

Cost conscious banks that are already on the Dual-I architecture and paying heavily to the SWIFT / network in recurring fees / charges could opt for ISP-LL and save monthly costs. Dialup users of SWIFT Net could switch to this topology and can enjoy better performance in almost the similar cost. In fact, very few ISPs in developing countries have comprehensive knowledge of SWIFT's network neither they have the awareness of SWIFT's products. By writing this paper our intention is to create awareness in the ISP market of Pakistan about the SWIFT's emerging business dimensions.

The product enables SWIFT customers to access SWIFT's Secure IP Network (SIPN) by using the infrastructure of local Internet Service Providers (ISPs). This ISP-LL service will be of great interest to those customers who currently have Dialup connections. It will also increase the choice for many other SWIFT customers by providing an alternative low-cost connection to SIPN via a permanent link provided by a local ISP.

The product is attractive in terms of cost and forthcoming usage that an ISP can easily market by targeting the strong financial industry of their country. Since the ISP markets of Pakistan, which can deploy this and other products of SWIFT, are unaware of the products as well as of SWIFT. While banks that are the member of SWIFT Belgium in terms of customers are aware of it.

This study would create recognition of the product as well as of SWIFT in the ISP markets of developing countries. By acquiring such product the banks in Pakistan could also scale their SWIFT services. This study would enable the product, the ISP market and the banking industry of developing countries to produce good to the economy by stepping up in the field of information technology.

## **5.4 RECOMMENDATION**

The ISP markets in Pakistan are struggling with different solutions and various network architectures they propose. Using their technological skills the ISPs of Pakistan can jump into the competition for the ISP – Local Loop and other products of SWIFT and can see their banking industry as their target market. There are several small banks in Pakistan that are not on SWIFT messaging solution and still rely on Telex.

Keeping in view these aspects, the ISP market can boost their business on one hand while banks on other hand can switch to standard financial messaging solution.

ISP's are capable enough to acquire SWIFT's ISP-Local Loop and Considering the banking industry as their prospective market for the product, the ISP's in Pakistan could follow this new dimension of business that the emergence of a product which is cost effective would not only provide a fruitful business but also would enable them to join the international community of SWIFT.