



Phoenix success story PCash, making waves in Pakistan and abroad

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TPS connects 1LINK to VISA International

Since inception of 1LINK, TPS has been continuously contributing to the services of the Largest Shared Switch of Pakistan. TPS Technology at the heart of 1LINK has let the Switch to, form a network of 15 banks, process millions of transactions over a network of more than 800 ATMs, and to power more than 2000 online bank branches in around 60 cities across Pakistan. And now TPS has taken 1LINK to the next step, connected 1LINK to VISA International, for debit card transactions.

With this attractive offer to provide Global acceptability of debit card transactions on any VISA ATM, TPS has just board Habib Bank Limited on to the 1LINK VISA bandwagon. Being one of the largest banks in Pakistan, Habib Bank is now successfully offering debit cards services to its customers on an International level. The recently launched Habib Bank "Value Debit Card" is just the beginning of TPS enabling Pakistani banks to offer services at an International level.

The financial sector of Pakistan is continuously realizing the importance of offering consumer services. With Habib Bank launching VISA, the 1LINK Switch comprising of 15 local banks and the largest shared ATM network in Pakistan, has successfully completed its first implementation of VISA.

As TPS strives to offer value added services to 1LINK, at a Shared Switch level rather than at an individual bank's level, we see the convenience and benefits of a centralized settlement and reconciliation process which will now ease the implementation for ALL 1LINK Member Banks that opt to offer VISA Debit Services to their customers.

VISA gives your debit card global interoperability, gives your customer the freedom to move around the World without having to worry about carrying cash, and gives your bank VISA connectivity with minimal operational and setup cost. TPS Technology has allowed 1LINK to give local connectivity with VISA. A member bank can then be both, issuer and acquirer, of VISA debit transactions, all in a ready to market and easy to deploy package.

Going forward, as TPS further strengthens 1LINK's service offerings, we will hopefully see more value added services being offered to local customers on International Networks.

Mr. Azfar Azhar Karimuddin
Regional Manager Business Development
TPS

New Releases
1LINK VISA Debit



For information about TPS, visit our website
<http://www.tpsonline.com>

TPS Phoenix - POS solution, PCash, making waves in Pakistan and abroad

PCash, meeting new market demands

Today's increasingly mobile and time-conscious banking customer demands instant access to electronic banking at wide variety of touch points. Now with TPS Phoenix and its POS solution PCash, customers can instantly make payments from point-of-sales at shopping malls, grocery stores, gas stations, or restaurants with their debit card.

Customer convenience is the linchpin of this service. No more carrying cheque books around to buy goods and services. To top it all up, point-of-sales placed at the bank counter allow customers to withdraw cash without cheques or having to fill out unwieldy withdrawal slips. PCash indeed gives new meaning to the concept of anytime anywhere banking.

In response to specific business requirements, TPS has provided POS debit solutions to Soneri Bank Limited, Pakistan, Watani Bank, Yemen and BRAC Bank, Bangladesh. With the successful implementation of the POS solution in these three markets, PCash is now a tested, full blown banking product.

When will your bank join in and give your customers the freedom to move around without having to worry about carrying cash or cheque?

Architecting the Perfect POS Solution

TPS Phoenix - POS solution, PCash, is a fully flexible system for driving and controlling multiple merchant and branch teller terminals, configured individually or in groups. At the regional level, PCash accepts connections from merchant terminals spread over a POS network in a broad geographic area, such as a city. At the central host level, Phoenix acts as a host 'front-end' processor. Standard features include multiple encryption keys, terminal, teller and merchant validation, electronic data capture from the POS device, automatic reconciliation with the POS device, industry standard message dialup or TCP/IP communications through NACC, POS limits and channel management, in addition to routing and settlement to local network.

The Business Challenge

Self-service banking industry in Pakistan and around the world has recently not just brought in opportunities, but also tougher competition and rapid change. Customers are becoming more demanding, while new technologies are emerging quickly. Banks are demanding a solution that can help them produce new services, create new service channels, streamline processes and retain customer loyalty, all while increasing customer convenience.

"TPS Phoenix - Point-of-Sale (POS) Management solution, PCash, adds innovative services to a bank's e-banking and e-payments services platform that can be quickly deployed and easily enhanced to meet future needs."

Mr. Shahzad Shahid
Regional Manager, Business Development
TPS

The Technology Solution

PCash for Merchants

Facing the same business challenge, Watani Bank Limited and BRAC Bank Limited are amongst the first few banks to benefit from TPS's point-of-sale merchant acquirer solution.

After the immense success of Phoenix at Watani Bank and BRAC Bank in 2004, the next step was to offer newer services on their SST network. PCash was opted for as the Merchant POS Solution.

"PCash is a very scalable solution and supports the needs of bank for merchant acquiring, and is flexible to be configured according to the banks' needs. Phoenix manages all the aspects of back-end system for merchant acquiring, while PCash provides all transaction types required for the end-to-end solution."

Abdul Mateen
Deputy General Manager - Credits
Watani Bank

PCash is greatly praised for its scalability, but there is also the need that catalyzes the process.

"The merchant acquiring business is tough, exciting and highly competitive. As payments of cash and cheque rapidly give way to card-based transactions, volumes rise inexorably upwards. The growing popularity of POS transactions reflect not only the changing lifestyles of cardholders but also present exciting new sources of potential revenue to acquirers "

Mr. Kaiser Tamiz Amin
Chief Operations Officer
BRAC Bank Limited

PCash, a replacement for cheques

While gaining colossal respect for a Merchant Acquirer solution, PCash's flexibility has allowed banks to replace cheques as well. Implementation of PCash at branch tellers has proved to be a remarkable solution and has resulted in great convenience for the branch tellers and the bank's customers while adding great value to the bank's self-service banking portfolio.

The new POS Cheque Service through PCash is a practical solution to replace cheques at the branch teller. In widespread use, the service can help banks reduce paper cheque-handling costs by significant figures, annually. The bank's potential savings are related to the percentage of cheques submitted and processed at the branches:

Now for the really good news, customers can use their existing debit cards, and the bank can start converting paper cheques and reducing paper cheque-handling costs and losses from the moment they launch the PCash POS Cheque service.

"PCash works like an electronic cheque but infact it is simpler and more efficient. The PCash POS Cheque Service offers your bank a variety of benefits that includes lower cheque-processing costs, reduced cheque acceptance risk, and increased incremental revenue."

Mr. Ovais Khan
Group Head Technology
TPS

Let's look at the figures. If consumers in Pakistan write about 2 billion cheques each year then think of the total handling cost of each cheque that is submitted at the branch teller. Despite the cost, think of the consumer inconvenience and branch teller management overheads due to long lines at the bank for receiving cash. Thinking on the same pattern, Soneri Bank Limited and BRAC Bank Limited have opted for the TPS POS Cheque solution for their branches. Soneri Bank and BRAC Bank have covered an extra mile by introducing these attractive new services for their self-service banking customers.

"We have a network of 53 Branches spread all over Pakistan including the Northern Areas of the country where no other private bank has ventured so far. PCash has made it very easy and convenient for our branch tellers and customers to process cash requests and get cash."

"Either a Soneri customer is in Karachi, Lahore, Islamabad, or in any other city at any Soneri's conveniently located branch. The customer does not need to worry about carrying his cheque book. The customer just goes to the branch, swipes his card on the PCash teller terminal, secure the transaction and gives the teller the receipt and immediately receives cash. This results in time saving, reduced paper cheque management, automated settlement and reconciliation procedures, and a happy customer."

Mr. Mohammad Haider Devjanie
Senior Vice President & Head I.T. Division
Soneri Bank Limited

"Implementation of the POS Cheque solution is straightforward because it builds on the existing Phoenix system and banking infrastructures. The solution has benefited BRAC Bank in many ways, specific benefits include, fewer cheques used for cash withdrawal, limited risk for cheque processing, quicker customer service, cost-saving opportunities, single-point processing efficiency, wide distribution, simple implementation processing, and the list goes on."

Mr. Kaiser Tamiz Amin
Chief Operations Officer
BRAC Bank Limited

Flexibility and integration are the key elements in all TPS solutions and PCash is no exception. As the market leader in the e-banking and e-payments industry in Pakistan, TPS strives to maintain this leadership through constant research and innovation. PCash, a product of choice for today's banks looking for innovative POS solutions, fully equipped for the needs of tomorrow.

When will your bank join in and give your customers the freedom to move around without having to worry about carrying cash or cheque?

New Associates

Technical Support

Fahim Raza
Senior Customer Support
Engineer

Arif Hussain
Network Administrator

Technical Development

Irfan A. Rehman
Software Engineer

Rabia Masroor
Software Engineer

Syed Shahbaz Ahmed
Software Engineer

Faisal Yousuf
Software Engineer

Muhammad Furqan
Zakeria
Software Engineer

Tanweer Khawar
Software Engineer

Rahil Ali
Software Engineer

Asma Sikandar
Software Engineer

Asif Shamim
Software Engineer

TPS at various International Exhibitions

This year TPS has actively participated at different International IT exhibitions. In the last quarter, TPS has been to four global exhibitions.



Nairobi Self-Service Roadshow 2005
Kenya

Nairobi Self-Service Roadshow 2005 - Kenya -

Held in the cosmopolitan, lively, interesting and pleasantly landscaped capital city of Nairobi, the exhibition highlighted on latest trends of self service industry, including new ATM models, Deposit Automation, Exchange Automation, ATM Monitoring. All major banks of Kenya and East Africa region attended the road show. Bank Chairmen and IT Heads were the target audiences. TPS presented and demonstrated SMARTdeposit, SMARTeXchange and InSight, which attracted attention of all audience. The new automated deposit and exchange technology created great interest and was acknowledged as a great source of high service with minimum operational cost as Kenya has great potential in banking sector and it attracts a huge number of tourists each year.



NCR Self-Service Roadshow 2005
Dubai

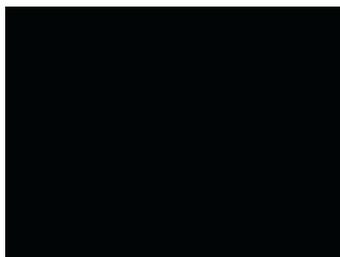
NCR Self-Service Roadshow 2005 - Dubai -

The theme of show was to target different industries where self-service can be utilized. The show was divided into different sections: Airport, Telco and Banks. TPS demonstrated its deposit automation and bill payment solutions. The Roadshow was attended by Bankers from all over Middle East and Africa. TPS products invited lot of interest from these customers especially SMARTeXchange, SMARTdeposit (for Telcos/for Banks), InSight and Eye.

GITEX - Gulf Information Technology Exhibition - Dubai -

among the world's top 3 IT Exhibitions celebrated its 25th Anniversary in 2005, GITEX continues to reflect the importance & phenomenal growth of the IT industry in the region by continually highlighting the latest technology & services from international manufacturers and suppliers.

TPS was amongst the few companies that participated under the banner of PSEB. GITEX 2005 gave great exposure to TPS in the e-banking and e-payments industry and TPS looks forward to the International IT Market for strengthening working relations particularly in the Middle East & North Africa region.



GITEX 2005
Dubai

Single Country Exhibition - Malaysia -

arranged and organized by Export Promotion Bureau of Pakistan. TPS participated in the "Single Country Exhibition" held at the grand Kuala Lumpur Convention Center. TPS showcased its leading e-banking and e-payments products and solutions in the exhibition. During the exhibition TPS solutions exposed the banking industry of Malaysia to newer avenues of e-banking. The market greatly praised versatility of TPS solutions and TPS' achievements in the e-banking and e-payments industry.



Single Country Exhibition 2005
Malaysia

Case Study: "Deposit to Debit"

The Customer

MTC-Vodafone, with one million prepaid customers in Kuwait, confirms its position as the leading mobile telecommunications operator in the country. MTC-Vodafone retains its market position by continuously introducing exciting promotions and innovative new services.

To offer its customers the convenience of 24/7 bill payments, MTC has recently launched a network of about 30 automated machines accepting cash payments using SMARTdeposit from TPS. MTC has termed this service as MobiQuick. It allows MTC to offer a variety of services in addition to cash deposit such as automatic recharge of prepaid connections and prepaid vouchers using recharge code. Within a few weeks after going live, MobiQuick gained the attention of MTC customers.

The Need

With growing market share and customer base, changing IT trends, and to further enrich the customer services portfolio, MTC decided to accept direct payments from customers that are using debit cards.

The Challenge

In the required solution MTC wanted to achieve maximum utilization of existing setup while deploying a cost effective solution for the new requirement. Another complex part was connectivity between MTC and KNET - The shared electronic banking switch in Kuwait, for authorization of debit card payments.

TPS with extensive experience in the e-Payments domain offered to provide a complete solution including debit card acquiring and connectivity with KNET as an extension of the existing MobiQuick setup.

The Solution

The SMART solution eliminated the need for a Financial Host by deploying a financial transaction processing middleware application. MobiQuick is now acquiring debit cards at the MTC terminals, directly routing the transactions to KNET, and then updating the transaction information at the MTC billing host. MobiQuick also complies with the quality and security standards of KNET by deploying added software and hardware security mechanisms.

MTC is also using InSight, for end-to-end network monitoring and management of their SST network.

The Success

MTC is the first non-banking institution in Kuwait that is certified with KNET. Many banks have expressed great interest in this new self-service initiative of MTC and are also in the process of joining hands with MTC to offer their debit card holders the facility of bill payments.

The successful deployment of this project has led MTC to think of offering newer services. A future prospect of MTC is to offer payments through Credit Cards on MobiQuick - yet another value added service for their customers.

Ahsan Jamal
Senior Software Engineer
TPS

Integration of Veritas High Availability solutions with TPS products

The past few years has seen a revolution in remote banking services in Pakistan. The convenience of ATMs, POS, telephone banking, call centers and Internet banking has led an increasingly large base of customers to rely upon remote banking for most of their financial interactions with their banks.

Fully automated remote banking has now become the life-blood of modern banking services. Ensuring non-stop operations and planning for disaster recovery is no longer an option. A mature approach is required to ensure that all elements in the system including hardware, operating system and application software gel together to deliver a high availability system.

TPS has been working closely with Veritas, the industry leaders in high availability systems, to offer different levels of fully integrated disaster backup, recovery and continuous availability solutions.

The range of Veritas solutions that TPS is testing and certifying with its products includes backup, replication and clustering. This article is the first in a series that will overview the various elements of a high availability system as well as the various corresponding products from Veritas.

Disaster Recovery and Business Continuity Planning

A comprehensive business continuity plan/information integrity plan would require a well-thought out phased approach and an understanding of system life-cycle and downtime costs. Broadly speaking, the following steps will have to be taken:

- Server consolidation and standardization at the Network Data Center (NDC)
- Consolidation of NDC storage on a shared storage device.
- Automation and centralization of data protection processes at the NDC (data backup and restore)
- Local High Availability (automated fail-over) for critical database and delivery systems (clustering)
- Construction and outfitting of a "hot" disaster recovery site for critical systems using synchronous or near-synchronous replication and fail-over technology (remote replication)

The rationale behind these steps is that while clustering technology assures the availability of data to users and customers, data is not protected unless it is available in offline format (tape). Further, continuity of operations in the event of a site disaster is not possible unless data is available from a secondary (disaster recovery) location.

TPS - ABM in the Proposed Solution

TPS has been working in collaboration with ABM to integrate and test its products and solutions with various Veritas High Availability systems.

All mission-critical TPS products and solutions have been certified with Veritas solutions and are now ready to go with your business continuity and disaster recovery plans.

This issue of Transzine discusses the Veritas **NetBackup** and **Volume Replicator** solutions.

Veritas Netbackup

As the name suggests, the Veritas NetBackup performs backup of selected data from a primary site to either a secondary site or a storage device.

Each Primary server will have the Veritas Main Server application that would be connected with the Secondary server. At regular intervals data backup will take place and the Secondary server will be replaced with the updated data. The same data backup can also be taken on other network or local storage devices such as HDD, Tape Drive, Data Store server etc.

When the Primary server fails the Secondary server may be switched to the live environment. This switchover is performed manually.

Veritas Netbackup Server v 6.0 provides a centralized environment, fully automated data protection and restore of all servers located at the Primary site and the Secondary or DR site. All network backup jobs, whether on the SAN or LAN, can be managed by the Primary site and all backup data can also be sent to a mid-range tape library attached to the SAN. Bare Metal Restore is a standard feature of the software and online database agents are highly recommended. Flash-snap and encryption options are also available.

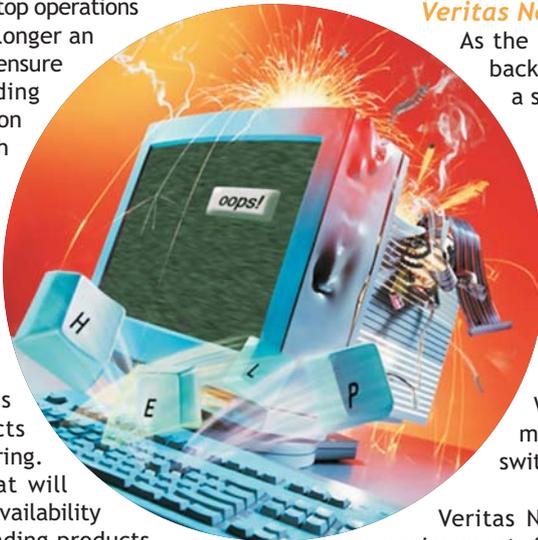
Veritas Volume Replicator

Veritas Volume Replicator (VVR) provides a local High Availability environment of all critical databases and delivery systems. VVR is capable of replicating in 1:N and N:1 configurations and. Whenever the Primary site witnesses change, the Secondary site is updated immediately, meaning both the locations are in-sync.

This allows a bank to have a true High Availability environment within the bank or at the DR site. The switching mechanism from the Primary to the Secondary site is also manual when only VVR is implemented. The Veritas Cluster Server enables fully automated failover of applications and reduces both planned and unplanned downtime. Veritas Cluster Server solution will be discussed in the next issue of Transzine.

One of the major advantages of Veritas is that it enables replication between dissimilar servers and storage devices.

Protect your e-business from Disasters. Take a look at Veritas solutions, consult with TPS and ABM, and make your Business Continuity and Disaster Recovery Plans today.



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