

Banking on technology in

Wired World

Technobanking is fast emerging as the most promising business segment. The infotech sector in India is gearing up to meet the growing needs of the banking sector and Infosys as a front runner in the IT industry has taken the lead in developing solutions for this sector.

Girish G. Vaidya, Sr. Vice-President and Head, Banking Unit, Infosys, as told to G.P.Vinaybabu



Banking is going through a very interesting phase. It is really at a cusp where a lot of things are going to change irrevocably. Till recently, power in the market used to be with the bank with the competition restricted and interest rates completely regulated. So, in any bank you effectively got the same thing. Of course, service levels made a difference, but it never made a huge amount of difference.

Today, the customers have become more aware. Interest rates have been deregulated, and customers have become more aware of what technology can bring in. So the customer service levels which used to depend essentially on individuals has now changed.

I have spent a large part of my life as a banker. What distinguished good banks from the not so good ones was the way we treated our customers. If it was a lady, we were expected to go to the other side and pull the chair. These type of things used to matter in those days. In nationalised banks, you couldn't get this kind of service then. Today, this has become irrelevant, because nobody has the time to do these kind of things. Today, what the customers are looking for is convenience. And time is very precious. Because they don't have time, they are looking for doing their banking at a time that is convenient to them and not to the bankers. There used to be a time when banks used to remain open only for 4 hours a day. Even today, lot of nationalised banks do that. But banks like ANZ have gone for 365x24 hrs banking. So the biggest change that is taking place in Indian banking, is the powershift towards the customers.

The second major change that is taking place is a very fine focus on risk management. World over, banks are adopting EVA (Economic Value Added) concept. What it means at the banking level is one dollar earned from any customer cannot be treated exactly the same. Customers today are getting classified into something like 9-10 categories. Most of the foreign banks have 10x10 kinds of categories. Pricing is dependent on that. One dollar earned from a top class customer, medium class customer and not so important customer gets discounted. So, one dollar earned from a top class customer is one dollar added to your bottomline. But from a medium class customer, it'll only be 95 cents. From a not so important customer, it is only 90 cents. This may be a little exaggerated, but the concept is that you are weighing your revenues in terms of risk that you are taking to generate that revenue. So, as long as you get revenues, it could cover your increasing cost. Whatever revenues you get, you should adjust it for risk.

Customer service and risk management

What is emerging as a solution to handle this is the technology. Technology is really a solution that can give a very effective control on your customer interest and risk management.

On the customer service side, it provides convenience to the customer. If you put an ATM you are making sure that a customer can access the bank 24 hours a day. If you introduce Internet banking you can do anything and everything that you do across the counter on the Internet, except of course deposit and withdrawal of cash. That means you can do your financial planning at a time that is convenient to you. So, technology is the greatest enabler to provide convenience. Secondly, technology is also able to provide a very high degree of personalisation. Once a bank grows big, it can't concentrate on personal service. But technology now helps you do that by Internet banking and datawarehousing.

You can have a data warehouse, which can tell you the preferences of your customer and what he wants. Many times, when you go to the customer and ask him what he wants, he will give you an answer that may not be accurate because what you want, you don't know yourself. But your behaviour is an indicator of what you actually want. This information is trapped, processed and a business process is established in a data warehouse that will provide a clear indicator of what a customer wants. Therefore, you can align your product in such a way that customer happiness is maximum.



If you take Internet banking into consideration, you can actually personalise the screens. Even at the ATM level you can personalise. So technology makes this kind of personalisation possible which is what at the end of the day selling is all about - to tailor your products to the customer requirements very efficiently. It also gives you a good idea of developing your marketing strategy. Effectively technology is converting an inanimate, customer non-friendly bank into a set up that is extremely customer friendly.

Technology to the masses

I come from a typical foreign bank, which was always meant for classes and not masses. ANZ was the closest to a nationalised bank with large branches in different parts of the country. In contrast Citibank, which is also a foreign bank was always restricted to the top cream of the society. Even today in Mumbai, Calcutta and Chennai, if you don't have 3-lakh rupees, you can't open an SB account. And

Cover Story

they had no qualms about it till recently. But see what they've done today in Bangalore. By using technology they have completely changed the banking paradigm. They've got 40 ATM centres scattered all over the city, sometimes even in remote corners. Through Suvidha system they today have about a lakh and twenty thousand customers. While driving past a Suvidha centre, as a banker I am always amazed to see the people who are getting into the centres. They are not typical Citibank customers. Many of them may not be good in English. (Not long ago there was a misconception that if you had to transact with a foreign bank, you need to know good English)

When I see the customers using Suvidha services, I see them being a party of the

masses. A bank like Citibank in a span of three years has achieved a customer base of 1,20,000, which many foreign banks who've been around for a longer time haven't been able to achieve. This is a classic example of the power of technology. Without technology Citibank wouldn't have been able to do this kind of revolution.

I quote an instance narrated by our chairman Narayana Murthy. He asked his office boy to get some cash from a nearby bank. Even though the branch office of the bank was nearby, the office boy preferred to go to an ATM. When asked he said, "Technology is efficient. It treats me exactly the same way as it treats the managing director of a company."

So in many respects technology is a

leveller. Technology understands no discrimination. Human bias is completely taken off. At the same time it would allow banks to extend their reach, make their operations more efficient, generate more profits thereby facilitating the extension of the banking services to rural areas.

Banking in rural segment

Technology is of two types - infrastructure technology and value adding (VA) technology. The infrastructure technology makes a bank more efficient. A very good example of infrastructure technology is the back office automation - clearing system automation, inter branch reconciliation etc. These are no benefit to the customer but improves banking efficiency. Whereas the VA technology is where the customer actually perceives value.

For urban areas, infrastructure plus VA technologies can be adopted whereas for rural areas infrastructure technologies can be strengthened. Once you cover the urban areas with VA technologies even rural areas would be ready for it.

Product range

Infosys has four products namely bancs2000 which is a product for the core banking solutions, bankaway which is an Internet banking product, bankconnect which is a financial middleware and pay away which is an electronic bill presentment and payment application.

The outstanding feature of bancs2000 is the web enablement of OnLine Transaction Processing (OLTP) solutions. Bancs 2000 is installed in 18 banks in 10 countries around the world. Prominent banks in India that have implemented this package are ICICI bank, Global Trust Bank, Canara Bank and State Bank of Mysore. bankaway has been implemented in 4 of the 6 banks that have gone in for Internet banking.

Leading Edge Technology

Bancs2000 is built using state-of-the-art technology. Designed with an Oracle RDBMS backend, its open architecture

Productwatch

Infosys has a range of banking products catering to all the banking requirements

Bancs2000

An integrated retail, corporate and trade-finance core banking solution

At the heart of any bank is Bancs2000, the processing engine with an in-built front end. This integrated core banking solution covers retail, corporate and trade-finance functions, helping you to quickly introduce and deliver world-class products to your customers.

- It supports multiple currencies, is Web enabled and has a powerful Workflow Engine. This secure solution is designed for scalability, performance and interoperability, to automate the various operations of your bank.

- The solution is customer-driven rather than account oriented with a comprehensive Customer Master File that provides the infrastructure for direct marketing and cross-selling activities.

- It supports multiple delivery channels, which gives your customers the freedom to bank anytime, anywhere, anyway!

- It has been designed keeping in view the global business environment and requirements of banks across the world. Because of its extensive parameterization capabilities, it can easily be configured to suit your bank's business needs.

- It has been built with a unique Workflow Engine that helps a bank to automate business processes and provide a high level of ease of use to end-users. This powerful option enhances the user interface to ensure optimum usage of the software.



supports a wide range of Unix servers. Bancs2000 employs a message based architecture, which ensures openness and facilitates easy integration with external systems. Naturally, it is Euro compliant and Year 2000 ready. The information Technology Association of America (ITAA) has certified that the Banking Business Unit has developed Bancs2000 using certified processes and methods, which are Year 2000 compliant.

Web Enabled Solution

Bancs2000 has a browser-based user interface that enhances your bank's productivity and performance. It is one of few fully Web enabled banking solutions that use Java technology, making it ideally suited for deployment in the Intranet environment. Bancs@Web(Web enabled Bancs2000) enables integration with

surround applications, creating a powerful banker's desktop. With nil application deployment and maintenance costs on the client side, it is the ideal solution for centralized implementations.

High Level Security

With Bancs2000, you can rest easy - it ensures security and integrity of all on-line transactions with a sophisticated multiple-level security system, while providing

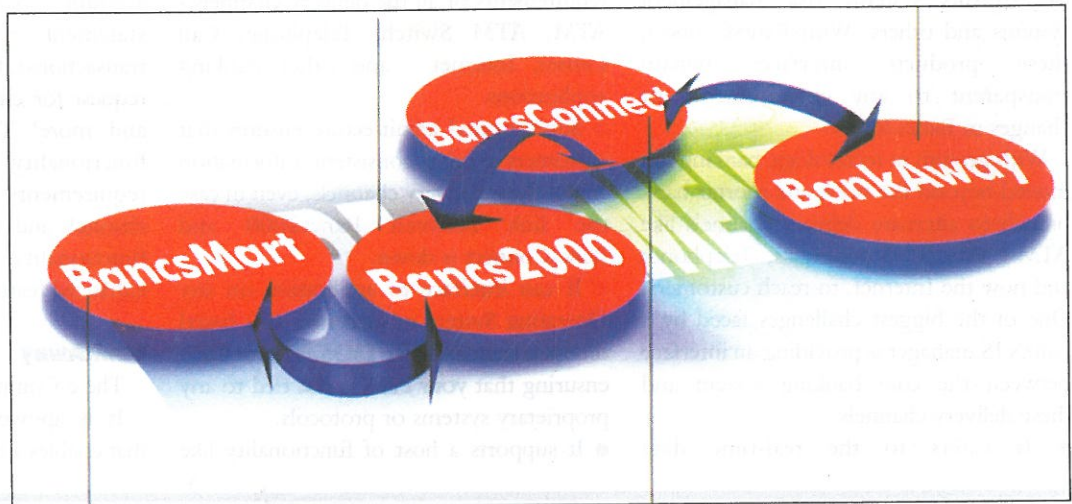
accurate up-to-date information to enable quick and efficient decision-making.

Bancs2000 is among the first banking products in the world to receive certification for system security and controls. Certified Information Systems Auditors (CISA) have certified Bancs2000 as a 'COBIT™ Compliant Product' using COBIT™ as the benchmark of the best security and control practices as adapted to banking. COBIT™ (Control Objectives for Information and Related Technology) is a generic standard for information systems security and control and is accepted and practiced worldwide as the breakthrough IT governance tool that helps in understanding and managing risks associated with information and related technology.

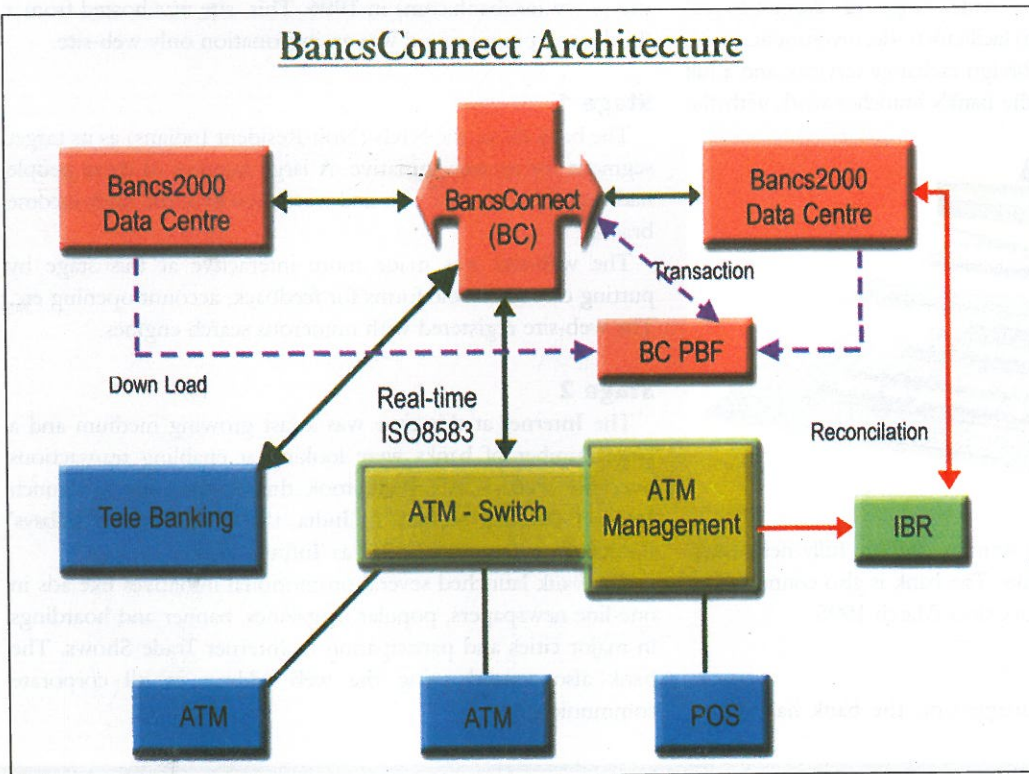
BancsConnect

The enterprise system integrator

BancsConnect provides a platform independent, next generation interface enabling seamless real-time integration between Bancs2000 and all delivery channels. It also provides a seamless interface between Bancs2000 and other banking applications



BancsConnect Architecture



Cover Story

like treasury systems, risk management systems and others. With BancsConnect, these products interfaces remain transparent to any enhancements or changes in Bancs2000.

With growth in technology, banking has moved beyond the brick and mortar bank branch to alternate delivery channels like ATMs, PCs, POS terminals, Telephones and now the Internet, to reach customers. One of the biggest challenges faced by a bank's IS manager is providing an interface between the core banking system and these delivery channels.

- It caters to the real-time data

requirements of all the delivery channels - ATM, ATM Switch, Telephone, Call Center, Internet - and other banking applications.

- Sophisticated architecture ensures that customers receive consistent information across these delivery channels, even in case the link between Bancs2000 and BancsConnect is down.

- It can interface to application on any Operating System or platform. It is based on open standards like ISO8583 and OFX ensuring that your bank is not tied to any proprietary systems or protocols.

- It supports a host of functionality like

account balance enquiry, account statement request (any number of transactions), funds transfer, stop payment request for checks and other instruments and more! This comprehensive set of functionality has been derived from requirements across various delivery channels and as a result complements the functionality of these channels with enhanced features.

BankAway

The e-Commerce platform

It is a powerful e-Commerce platform that enables a bank to offer diverse services

Customer case study

The ICICI Bank is a commercial banking outfit set up by ICICI Limited. The Bank was registered as a banking company on January 5, 1994. It has an authorized capital of USD 41.8 million. The bank has shown excellent growth and its revenues stood at USD 150 million for the financial year 1998-99

Banking Environment

The bank has a network of over 62 Branches and 10 Extension Counters. The Bank offers a wide range of domestic and international banking services to facilitate trade, investment, cross-border business, treasury and foreign exchange services, and a full range of deposit services. All the bank's branches work with the

been at the forefront of embracing technology. ICICI was the first bank in India to take the giant step on the Web.

The web initiative of the bank has evolved through three broad stages. In the initial stage, the bank had a static web-site with low interactivity. However, the bank has been evolving from being a static information service provider towards a portal for value added financial services for its customers, on the web.

ICICI Bank launched its web initiative by setting up the web-site (www.icicibank.com) in 1996. This site was hosted from a third party premises and was an information only web-site.

Stage 1

The bank chose the NRIs (Non-Resident Indians) as its target segment for its web initiative. A large number of these people had easy access to the web and were mostly in the high-income bracket.

The web-site was made more interactive at this stage by putting downloadable forms for feedback, account opening etc. The web-site registered with numerous search engines.

Stage 2

The Internet at this time was a fast growing medium and a large number of banks were looking at enabling transactions over the web. ICICI Bank took this opportunity to launch Internet Banking services in India, the first in India. Infosys' BankAway software, branded as 'Infinity' was deployed.

The bank launched several promotional initiatives like ads in one-line newspapers, popular magazines, banner and hoardings in major cities and participation in Internet Trade Shows. The bank also started using the web address in all corporate communications.



state-of-the-art technology and systems, and are fully networked using terrestrial and satellite links. The bank is also connected to the international SWIFT network since March 1995.

The Web Initiative

Owing to the visionary management, the bank has always

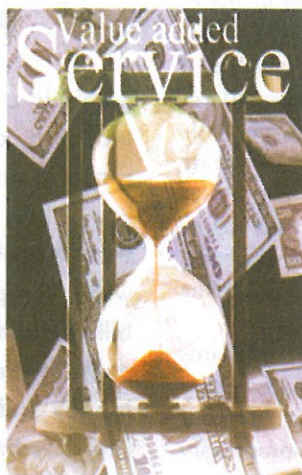
like retail banking, corporate banking, investments, third-party payments and shopping over the Internet with complete customer orientation.

It has a flexible design, which can be customized to meet bank's requirements. Based on open standards, BankAway enables your bank to easily support transaction processing on your Web Site. BankAway has a robust architecture that is extremely scalable and can easily handle varying customer load on the Web Server. Designed to interface with different core banking systems irrespective of their platform, BankAway ensures that the bank

can integrate with the e-Commerce marketplace in no time!

Powerful E-Commerce Platform

BankAway empowers a bank to provide on integrated financial service offering to your customers - the one click access to retail banking, corporate banking, investments, portfolio management, credit and



payments, on-line shopping, utility payments and even payments to third party individuals and institutions. It links to multiple front-end mechanisms (PCs, browsers, Web TV, etc.), while providing real-time connectivity to diverse systems like, core banking system, ERP systems, Bill payment service providers, Payment networks, and EDI Networks - assuring

Stage 3

India was slowly waking up to the call of the Internet, and the bank decided to target the resident Indian population too. The bank enabled funds transfer between the individual/corporate accounts. The bank also has tied up with utility companies for enabling bill payments through the bank. As part of this strategy, the bank is enabling not just retail functionally but also corporate banking functions for business customers on the web.

The ICICI Group, the holding company of the bank, is also enabling transactions for the customers of the ICICI Group over the web i.e. the ICICI group is aiming to be a financial portal on the web.

Internet Banking Services

The transactional capabilities at the bank's website, www.icicibank.com have been enabled using BankAway from Infosys. The bank has steadily added numbers across various segments. This is possible because the functionally enabled is not just for the retail customers of the bank, but also for the corporate customers.

Some of the functionalities available include :

- Account Access
- Statement Download
- Funds Transfer
- Bill Payment
- Third Party Fund Transfer
- Trade Finance

The software product also has the capability to enable payments for On-line Shopping using the bank's 'Infinity' services.

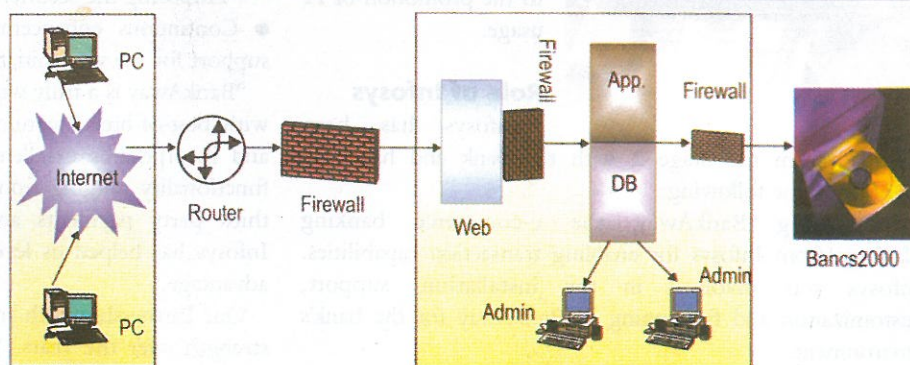
Key Benefits for the Bank

- The bank has a healthy base of over 10500 + registered customers using the Internet Banking services
- Expansion of geographical reach beyond brick & mortar branches. Today the bank's clientele originates from over 67 different countries.
- High visibility in all customer segments- retail & corporate
- One of the fastest growth in individual deposits.

Accolades Received

The bank has received several accolades in the domestic and international for a for its web initiatives. Some of them are:

- The bank was identified as one of only 44 'true' Internet banks outside USA by Bank Technology News International in late 1997
- The bank has been awarded "Highly Commendable Business Website" rating by Financial Times, London, two years in



Setup for Internet Banking

Cover Story

your bank on integral position in the e-Commerce marketplace.

It gives your bank the option of offering a whole gamut of banking services to customers. With BankAway, not only retail customers but your corporate customers as well can bank on-line.

The BankAway payments engine enables other Web sites to link to the bank, so the customers can pay for their on-line shopping through your bank.

It is based on open standards that have been developed and endorsed by industry leaders, thus ensuring that your bank is not limited by any proprietary systems or protocols.

It is designed to enable you to use customer information to provide each customer with a personalized experience.

Payaway

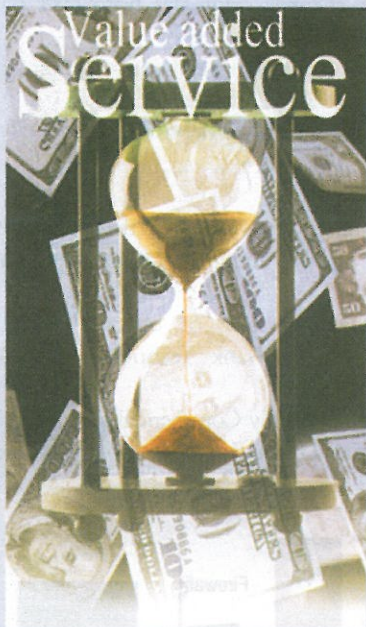
This is a very new concept in India. It allows electronic bill presentment and payment. A bank can make arrangement with telephone, electricity and water companies, which produce bills digitally and interface it with debit payment. This way lot of money and material is saved and the entire mechanism of collecting payment is made simple. This can also be integrated with SCM.

Multi-Layer Security

Security is a key requirement for financial transactions over an open network. BankAway addresses security at multiple levels - transmission level, Web-server level and application level. BankAway matches up to the most secure financial solutions in the world with open standards like Secure Scokets Layer (SSL) and 128 bit public key cryptography.

Security Consulting

Along with powerful security features in BankAway, Infosys also offers security-consulting services to assist your bank in setting up the secure environment necessary for implementing on-line banking.



running and has been shortlisted for the current year.

- The bank was also awarded "Cyber Corporate of the Year" at India Internet World 1998 for its Internet Banking project.

- ICICI Bank has also won the CSI National Award for the Best IT usage. The award is in recognition of significant contribution to the promotion of IT usage.

Role of Infosys

Infosys has been involved from the Stage 2 with the bank and has been involved in the following:

- Providing BankAway, the e-commerce banking platform from Infosys for enabling transaction capabilities. Infosys was involved in the installation, support, customization and fine-tuning of BankAway for the bank's environment.
- Setting up of the demo. The BankAway templates were customized in continuation visual style and navigation already existing at the bank's web site. The static

demonstration was released on the web-site. The customers were able to get a feel to register for the Internet banking services.

- The bank's designated personnel were trained on customisation of templates, maintenance and enhancements. Infosys also provided a comprehensive hands-on training for them.

- Infosys has worked in conjunction with the bank's personnel to evolve Security Consulting Services. This involved:

- Understanding the existing Web site architecture of the bank
- Understanding the existing security architecture of the bank
- Identifying the transactions proposed to be deployed on the Web over a three year period
- Proposing the security architecture for bank

- Continuous enhancement, tuning-up, upgradation and support for the web initiative of the bank

"BankAway is a truly world-class Internet Banking solution with 'best-of-breed' features. It is built on industry standards and incorporates excellent security features. By providing functionality ranging from retail and corporate banking to third party payments and the unique payments engine, Infosys has helped us leverage the Internet for competitive advantage.

Our Partnership with Infosys has grown from strength to strength over the years. We have found Infosys personnel extremely committed to provide high levels of support and customer service. The Infosys team has been proactive in understanding or requirements."

