The Role of Information Technology in Banking

The role of information technology in the banking industry has changed dramatically. Working in the banking industry for the past fifteen years, I have had the opportunity to witness a complete transformation of the way business is conducted. IT has made e-business possible in this industry.

One of the internal networks that allow the bank to do e-business it’s sales force automation and analytics E-Business solutions which helps streamline operations and increase customer loyalty and sales effectiveness throughout its nationwide commercial sales force and network of all its branches.

It supports the company nationwide mobile sales force and give more than 250 workers access to the company’s online Customer Relationship Management system. The system has helped First Union to identify customer needs and provide more personalized service through any point of customer interaction. FU strategy was to gain competitive advantage with a more advance system for collecting, managing and leveraging customer information that will increase the productivity of the sales force.

Another capability of this network include: centralized and up-to-date customer information across multiple communications channels; advanced reporting to analyze data from all customer transactions; management of compensation and incentive plans across multiple selling channels; advanced reporting to analyze data from all customer transactions; management of compensation and incentive plans across multiple selling channels; accurate management of sales leads and the revenue pipeline, accurate, real-time customer quotes and proposals; identification of cross-sell and up-sell opportunities, and extension of sales channels to the Web.

We have implemented the intranet as an external function. Because we not only compete with businesses for job candidates. We have managed to increase the number of employment applications by 10 percent while making sure that only high-quality candidates are referred. Our employment recruitment site is a 24/7 operations. The recruitment application runs from
the ralled on the desktops, only a Web-browser and an Internet connection are required. Web; nothing is install.

Employing an online recruiting system makes the process of applying for a job easy and understandable, and it helps a public agency in its talent battle with the private sector. This system saves time when collecting and screening applications, sending out notifications, and arranging testing and interviews. The business saves a lot of money by eliminating paper mailings and now receives about 76 percent of its applications online.

The system consists of an online employment center, which posts jobs, accepts applications, and permits review and communications directly with the hiring department. It combines paper-based and electronic forms into a single database. The Application Tracking module updates application status throughout the hiring process, sends notices, and refers them to a hiring department.
HARDSHIPS FACED DURING TRADITIONAL BANKING:

Although traditional banking has gone through many hardships still this period has lasted for quite a long time. The manual way of operations caused a lot of inconvenience. However, it was eventually rectified with the introduction of information technology (P.C.) in banks. Some problems faced by the banks in the primitive age were:

1. **Maintenance Of Records And Documents**
   As there was no method of storage, all the records had to be maintained in the form of files. Banks were penalized with huge amounts for not maintaining the records as prescribed by the RBI.

2. **Time Factor**
   As there was no technology and all the transaction entries had to be manually posted into the books. People had to stand in long quos to get their work done (e.g.) update their passbooks or withdraw money.

3. **Accuracy:**
   As there was a human element involved, and human tends to make mistakes. 100% accuracy could not be maintained. The procedure to calculate the interest was very tedious so there were many mistakes while calculating it.

4. **Irregularity Of An Employee**
   The set of work to be conducted was allotted to each employee, and if that employee was on a leave or failed to appear the work to done by him was left pending and the customers were not entertained.
5. **Burden Of Work**

As all the books of accounts had to maintained manually, and each entry had to be posted and checked at the end of each day the work load increased of the employees. This lead to a displeasure among the employees on seeing the customer, they did not entertain the customers, nor provided them any service to reduce their job.

However, all these problems gave rise to need for IT in banking sector. Slowly, the traditional banking also realized the power of technology and initiated the absorption of technology to retain their profitable customers, and to enhance their efficiency, productivity and competitiveness.
**NEED FOR INFORMATION TECHNOLOGY IN BANKING SECTOR**

Banking environment has become highly competitive today. To be able to survive and grow in the changing market environment banks are going for the latest technologies, which is being perceived as an ‘enabling resource’ that can help in developing learner and more flexible structure that can respond quickly to the dynamics of a fast changing market scenario. It is also viewed as an instrument of cost reduction and effective communication with people and institutions associated with the banking business.

The Software Packages for Banking Applications in India had their beginnings in the middle of 80s, when the Banks started computerising the branches in a limited manner. The early 90s saw the plummeting hardware prices and advent of cheap and inexpensive but high powered PC’s and Services and banks went in for what was called Total Branch Automation (TBA) packages. The middle and late 90s witnessed the tornado of financial reforms, deregulation globalisation etc. coupled with rapid revolution in communication technologies and evolution of novel concept of convergence of communication technologies, like internet, mobile/cell phones etc. Technology has continuously played on important role in the working of banking institutions and the services provided by them. Safekeeping of public money, transfer of money, issuing drafts, exploring investment opportunities and lending drafts, exploring investment being provided.

Information Technology enables sophisticated product development, better market infrastructure, implementation of reliable techniques for control of risks and helps the financial intermediaries to reach geographically distant and diversified markets. Internet has significantly influenced delivery channels of the banks. Internet has emerged as an important medium for delivery of banking products and services.

The customers can view the accounts; get account statements, transfer funds and purchase drafts by just punching on few keys. The smart card’s i.e., cards with micro processor chip have added new dimension to the scenario. An introduction of ‘Cyber Cash’ the exchange of cash takes place entirely through ‘Cyber-books’. Collection of Electricity bills and telephone bills has become easy. The upgradeability and flexibility of internet technology after unprecedented opportunities for the banks to reach out to its customers. No
doubt banking services have undergone drastic changes and so also the expectation of customers from the banks has increased greater.

IT is increasingly moving from a back office function to a prime assistant in increasing the value of a bank over time. IT does so by maximizing banks of pro-active measures such as strengthening and standardising banks infrastructure in respect of security, communication and networking, achieving inter branch connectivity, moving towards Real Time gross settlement (RTGS) environment the forecasting of liquidity by building real time databases, use of Magnetic Ink Character Recognition and Imaging technology for cheque clearing to name a few. Indian banks are going for the retail banking in a big way

The key driver to charge has largely been the increasing sophistication in technology and the growing popularity of the Internet. The shift from traditional banking to e-banking is changing customer’s expectations.

**Impact of IT on Banking System:**

The banking system is slowly shifting from the Traditional Banking towards relationship banking. Traditionally the relationship between the bank and its customers has been on a one-to-one level via the branch network. This was put into operation with clearing and decision making responsibilities concentrated at the individual branch level. The head office had responsibility for the overall clearing network, the size of the branch network and the training of staff in the branch network. The bank monitored the organisation’s performance and set the decision making parameters, but the information available to both branch staff and their customers was limited to one geographical location.
DRAWBACK OF I.T. & ITS SOLUTIONS

1. Challenges before traditional banks in absorption of technology

The heavy initial investment involved in infusing technology is a major limitation for many banks. Also, one of the main constraints faced by traditional banks is the inadequate infrastructure in rural areas where they have branches in large numbers. One model followed by some of the banks is the 80-20 rule concentrate on 20% branches in cities and towns which will cover 80% of the business.

In early days of banking the employees found it very difficult to cope up with the emerging technology. As the applications used during that time were very lengthy and complicated. Employees found the traditional tidies methods to be comfortable rather than computers. But later the technology improved and is still making remarkable progress in banking sectors. I.T. has now in recent times arrived with total banking solution software’s.

And to make the employees feel at ease with the application a special training is provided also the concept of help desks have been availed.

Help desks
Banks are running Help Desk on 24/7 basis as single point of contact to assist resolution of problems faced by users of core banking branches. These are contacted when branch user encounters problem with respect to software or hardware which could not be resolved by the local IT officials.
2. **Cost pressure**

For achieving maximum effectiveness, the technology solutions should be in alignment with the business requirements of the banks. As each organization has its own unique operational style, it has to be properly analyzed and then opt for investing in technology. This is one of the toughest challenges for any traditional banks in India. Cost pressure comes into play when banks are not able to afford the cost of a certain service or initiative although they want to. This is primarily because the cost structure at the backend is not efficient enough to offer that kind of service to the marketplace.

3. **Is traditional branch banking dead?**

The extent to which new regulatory policies and technology has transformed the banking industry brings to one moot question: Is traditional branch banking dead?

But despite the benefits offered by other technologies in terms of lower costs it looks like branch banking is very much here to stay. Branch banking itself is undergoing a transformation. Initially banks used their retail outlets to provide services to the individual customer. Now they are using the branches to inform and educate customers about other, more efficient channels to conduct common transactions like cash withdrawal or balance checks.
Innovating Banking Technology 2011

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IBS Journal: Innovating Banking Technology Supplement

'One of the most common challenging remarks to innovators is, what about delivery? Are you just a bunch of guys surfing the web, going to nice conferences and playing with your iPad? Or are you really going to deliver something to the organisation?'
Matteo Rizzi, Swift

In the world of technology, innovation is one of those loose concepts that pretty much all vendors will claim to be engaged in. The end results are largely subjective: the line drawn between a genuine innovation and one that is merely a short-lived gimmick is a fine one at times. As such, the temptation to round up a bunch of the latest banking software offerings and present them as 'innovation' has been resisted in this latest IBS Journal Supplement, not least because you can read about new ideas anywhere including, of course, the regular IBS Journal printed and online versions. So for this exploration, we were more interested in the processes that deliver these new ideas into the world; processes that quite likely will be around a lot longer than some of the products on offer.

There is no doubt that blood, sweat and tears have gone into most of the ideas out there and IBS is not about to belittle any of these efforts. But true innovation – where something changes the world forever – is rare. Many millions of ideas will form, live or die for each single significant creation, but sometimes an idea that has limited appeal will be taken and serve as the spark of life for such an event – the birth of the 'strong steam' engine from the limited success of the atmospheric condensing engine being a classic example from the field of engineering. This is why it is essential to keep pushing ideas and moving the industry forward – and to have people 'playing with their iPads', talking to each other, seeing what's out there and generally immersing themselves in constructive thought.
Apple Tablet PC is rumored to arrive soon, and will add some oil to the fire with discussions on touchscreen devices and their possible use. The two greatest achievements so far were the successful iPhone plus its ‘hot butter touch’ GUI and Microsoft Surface which was superior on videos, but never really made it to the wide public use. An other interesting touch approach is Skreeno, which turns the shop (bank branch) window to a giant touchscreen, can be approached from inside or from the street.

So the question is how to use touch technology meaningfully in bank branches?

For example Barclays Piccadilly introduced Microsoft Surface as a spectacular product selection toy recently.

Some more ideas:

- Provide a tablet PC to any customer coming into the branch to make a self-advisory or do online banking on it (preferably sitting on a café-style all-window room and sipping latte).

- Make a beamed product show onto the branch window and let it be browsed from inside or outside. A simple cover flow of products would attract the people immediately.

- Use an interactive Surface table for the visualization of complex mortgage parameters, giving a clear pictorial image of the calculation results for the advisor and the customer in the same time.
Redefining Self-Service Banking for BBVA GROUP

An automated teller machine developed by a bank for its customers

BBVA is a global financial-services provider with more than 47 million individual and corporate customers. The company, which operates in more than 30 countries, is the largest bank in Mexico and a leader in Spain and the Americas, including significant holdings in the United States. In 2009, BBVA — which takes pride in its sharp customer focus — was named the Best Bank in Latin America as part of Euromoney magazine’s Awards for Excellence.

At the outset, the team faced the challenge of overcoming ATM industry standards. Product development was driven by hardware manufacturers, which supplied banks with a catalog of available ATM models to choose from. BBVA teamed up with IDEO to develop a system based on customer needs. It’s also an automated teller machine designed to gain a competitive advantage. With IDEO’s help, it has shifted the industry paradigm to custom-design a machine around user experience.

The multi-phased project began with work to fully understand these needs. The design team interviewed and observed ATM users at BBVA and other bank branches in Spain, Mexico, and the United States. The team also examined analog self-service experiences, such as those at gas pumps, supermarket checkouts, and train-ticket kiosks.
Using insights they gained through this research, IDEO and BBVA outlined a strategy of innovations around the self-service channel and the business case for building a custom-designed ATM that offered all of the most common banking transactions in a simple, flexible, and intuitive manner. The team also revamped the bank’s internal communication strategy and collaborated on user feedback programs during the pilot stages. Throughout the development process, IDEO and BBVA worked closely with manufacturing partners NCR and Fujitsu to ensure that the original design intent was maintained throughout the engineering, build, and implementation of the new ATM.

The new machines improve privacy, ease of use, and simplicity. The customer stands at 90 degrees to anyone else who may be waiting, shielded by a frosted panel. All operations, including PIN entry, are completed on a 19-inch touch screen that displays only information relevant to the transaction at hand. All cash, statements and receipts are handled in and out through a single slot. Five pilot ATM units were installed at BBVA branches in Madrid by early 2010 and BBVA plans to roll out the ATMs in different countries over the next few years.

http://www.futureselfservicebanking.com/

ATMs were first introduced over 40 years ago and since then many features have been incrementally added to the machines, in order to fulfill the dream
of a truly "automated teller". Modern ATMs offer a wide range of banking transactions; nevertheless the actual interaction has remained largely untouched.

In early 2007 the Spanish bank BBVA asked IDEO to re-think their self-service channel from scratch. The question was not how to further automate the teller, but rather how to humanize the machine.

We started with a blank slate by really listening carefully to people talking about their banking experience; we observed subtle clues and behaviors that spoke to unmet needs when using machines.

The result of that work is the vision for a totally new self-service experience: an ATM built from user up, rather than components down.

Have a look at the video to learn about the unique features of the envisioned self-service experience.

Today, that vision is reality. It took 2 years of time and a team of committed companies to develop this ATM.

In 2009 the first pilot units have been installed, while BBVA prepares to roll out the ATM across its Spanish branches.

IDEO, May 2010
Retinal scans, finger prints or facial recognition get most of the attention but developers across the world are quietly labouring away at alternative types of biometrics.

Recognition by the way someone walks (their gait) or the rhythm they make when they type and others have each been tried as potential biometrics. Hitachi is adding to this stock with the worldwide release this month of a finger vein identity authentication device.

Kit based on the technology will be available. Hitachi is also making a software development kit available to integrate the unit into existing security set-ups.

The product is based on PC log-in technology that's been on sale in Japan since October 2006. The technology is also as a validation device for bank ATMs: according to Hitachi, about 80 per cent of the financial institutions in Japan had adopted finger vein biometrics by the end of March 2007. Other applications such as opening car doors may also be possible.
The technology uses the vein patterns in users' fingers to manage their computer login process. A single chip design means the unit can be small and cheap.

User biometrics are captured, and subsequently verified, using a contact-less technique. Light penetrates through the finger using a light-transmission technique to allow the detection of the structure of the vein pattern. This vein pattern is image-processed using a special algorithm, resulting in digital data that can be stored in a relevant data repository.

Hitachi reckons vein authentication can offer higher accuracy rates than finger print recognition, with the additional benefit that finger vein patterns are thought to be impossible to forge. By contrast, finger print recognition technology has proved all too susceptible to attack.

http://www.businessnewsthai.com/thailand/smartphones-futures-credit-cards/

Smartphones futures credit-cards?

TECHNOLOGY/BUSINESS NEWS — Beyond basic communication, information and entertainment, smartphones now offer the ability to complete financial transactions via new credit-card applications.
With smartphone use expanding rapidly, local banks are looking for innovative, convenient ways for cardholders to access their bank information at a minimum of expense.

Kasikornbank, Siam Commercial Bank, Bank of Ayudhya and Citibank all offer credit card applications for free from the App Store for iPhone, App World of BlackBerry and Android Market for Android-based phones.

Mobile applications also help financial institutions communicate more effectively with customers and send out regular promotions at a much lower cost than for mailing out brochures.

In general, the credit card apps now available have five or six categories: dining, shopping, travel, petrol, beauty and healthcare, and golf. A good app should make it simple to find card promotions and show a list of participating merchants, addresses, telephone numbers and a map.

For example, if you have a business meeting around Silom and want to have lunch after that, a credit card app can help you find good restaurants in the area with promotions linked to your card. The application should also allow you to make a booking and share such information with friends to invite them to join the meal.
The travel category would let the consumer know about discount hotel prices. If you’re holidaying in Phuket, for example, the golf section of your credit card app could inform you about local courses with promotions and recommendations, and help you book a tee time.

Shoppers can check promotions before going shopping, and holders of credit cards from international banks can find information about campaigns of participating merchants worldwide. For example, when you go shopping in Hong Kong, you can search for promotions of shopping malls, restaurants or hotels.

Your smartphone, in short, can do a lot. The convenience of the credit card app might even induce you to spend more money than you might have planned.

But as a smart consumer, you will soon get into the habit of navigating to other places in the application where you can track how much money you’ve spent and when the bills are due.

Here’s a look at some of the applications now available:

Kasikornbank shows you a list of participating merchants near your current location with telephone numbers and maps. Features include:

- What’s New: A list of highlighted promotions of the month.
- Promotion: Special offers near your current location by category with call function and map.
- Lifestyle: Recommend places for dining, travelling and shopping to suit your lifestyle.
- Service: Special services offered by K-Credit Card.
- Search: Search promotion by category, zone, discount, or by keyword.

Note that the application requires you to enable the location function of your iPhone. Results may vary depending on cellular coverage and platforms such as GPRS, Edge, 3G and WiFi.

Siam Commercial Bank SCB Spot organises SCB card promotions and benefits into categories such as Dine, Shop, Travel, and Deejung. Convenient search features can link you to more than 1,500 participating businesses nationwide. Search for shop listings, discounts and offers according to each type of SCB credit card.
If the location feature of your phone is enabled, you can locate promotions and benefits near where you are. The accommodation section, meanwhile, shows promotion and benefit details and telephone numbers.

Krungsri Buddy helps Bank of Ayudhya Krungsri cardholders search for deals with more than 1,000 participating merchants, restaurants, hospitals, golf courses, hotels and more. Maps showing Bangchak service station locations, where up to 3% cash-back offers are available, are helpful for drivers. Features include:

- **Dining:** More than 500 participating restaurants, categorised by type such as American, Chinese and International Buffet.
- **Travel:** More than 100 participating hotels and websites for trip planning.
- **Hospital:** In case of emergency, you can search for more than 100 participating hospitals in Thailand.
- **Golf:** More than 80 participating courses.
- **Lady:** Special privileges for Krungsri Lady Titanium MasterCard holders.
NEW BANKING STYLE IN PROVIDING SERVICES

In Athens, a new concept for banking has opened which brings together the best elements of a successful retail space, with banking services in a comfortable contemporary space. The new i-bank store, operated by the National Bank of Greece is a sleek and stylish store concept from Allen International, in which the technology and services on offer blend seamlessly into the architectural design.

Michael Allen, Chairman of Allen International says, “i-bank is a technologically innovative, ecologically responsible, and customer friendly space that changes people’s perception of a bank.”

Working with Allen International, digital signage company Beaver Group produced some eye-catching content design for the interior wall space. The harmonious combination of architectural design and new technologies complement the hallmark features of i-bank. The finished result is a customer space which is open and a stylish reflection of contemporary banking.

C-nario provided the digital signage platform, C-nario Messenger, while Panou, a Greek company specialized in audiovisual equipment and projects, served as the prime contractor and project designer and integrator.
Tamvakakis Apostolos, CEO of the National Bank of Greece explains,

“The i-bank store is for everyone; those who already use i-bank’s online services and those who will see the benefits of automated banking services for the first time. Everyone in the i-bank store will have the opportunity to make a step forward into the future and explore new opportunities that technology can offer us.”

The digital signage network includes 16 screens (including three touch screens) and five projectors. The displays show educational and promotional videos about NBG’s i-banking services, as well as entertaining content, creating an exciting atmosphere. Twelve of the screens are arranged in a row at portrait orientation, enabling the display of synchronized content on multiple screens, as a single, fully integrated, homogeneous display element, resulting in an amazing and innovative visual effect.

The touch screens, located in a special interactive area, enable visitors to experience i-banking services and play interactive games directly on the screens. Five projectors have been installed: three project digital content on screens suspended from the ceiling, and two project on the floor at the entrance.

“Digital signage has become an important element in modern banking, allowing a more effective customer experience and communication,” said Tamir Ginat, C-nario’s CEO. “It is only natural that digital signage has been chosen by NBG as a primary means to raise public awareness to the tremendous potential and benefits of e-banking.”
I.T. in Banking:

1). Technology has opened up new markets, new products, new services and efficient delivery channels for the banking industry. Online electronics banking, mobile banking and internet banking are just a few examples.

2). Information Technology has also provided banking industry with the wherewithal to deal with the challenges the new economy poses. Information technology has been the cornerstone of recent financial sector reforms aimed at increasing the speed and reliability of financial operations and of initiatives to strengthen the banking sector.

3). The IT revolution has set the stage for unprecedented increase in financial activity across the globe. The progress of technology and the development of world wide networks have significantly reduced the cost of global funds transfer.

4). It is information technology which enables banks in meeting such high expectations of the customers who are more demanding and are also more techno-savvy compared to their counterparts of the yester years. They demand instant, anytime and anywhere banking facilities.

5). IT has been providing solutions to banks to take care of their accounting and back office requirements. This has, however, now given way to large scale usage in services aimed at the customer of the banks. IT also facilitates the introduction of new delivery channels--in the form of Automated Teller Machines, Net Banking, Mobile Banking and the like. Further, IT deployment has assumed such high levels that it is no longer possible for banks to manage their IT implementations on a stand alone basis with IT revolution, banks are increasingly interconnecting their computer systems not only across branches in a city but also to other geographic locations with high-speed network infrastructure, and setting up local area and …
Advanced Mobile Banking Technologies

Smartphones, like Apple's iPhone, have functions that make more advanced mobile banking possible.

The next generation of mobile banking is the most similar to the Internet banking paradigm. It requires an application — either a browser or a standalone application — and a more advanced smartphone to run it. Smartphones are more like real PCs, with an identifiable operating system and advanced functionality, such as enhanced data processing and connectivity. There are two approaches to setting up this type of mobile banking.

**Wireless Application Protocol (WAP)**

WAP is the technology architecture that makes accessing Internet pages possible from a mobile phone. Because it includes the concepts of browsers, servers, URLs and gateways,

WAP provides a user experience that echoes Internet banking conducted on a home computer. This is an attractive feature to many banks, who also
appreciate the fact that customers don’t have to download any proprietary software to enjoy robust access to a full line of services and transactions.

WAP banking does have its disadvantages:

- The browsers that run on mobile phones must work on a very small screen. As a result, banks must create "mobile-friendly" sites that work more efficiently in cramped quarters. Even with such accommodations, the number of clicks required to complete a task can be prohibitive.
- WAP banking requires a smart phone or a PDA, but such devices represent less than 10 percent of the phones in use. Even if a customer has a WAP-enabled phone, he or she can elect not to sign up for the more costly data plans required for Internet access.
- Mobile phones lack the level of anti-virus and personal firewall protection now considered standard on PCs.
- Two-way communication isn't possible. Customers can initiate a dialog, but banks can’t.

**Standalone Mobile Application**

Some banks are now providing a downloadable client that mobile subscribers can use to access bank services. These mobile applications offer a reliable channel and enable users to conduct even complex transactions. They also allow banks to customize the interface and brand it accordingly.

Although this solution likely represents the future of mobile banking, there are some issues. First, users are forced to download, install and learn a proprietary application. Not only that, the application must be customized to each mobile phone on which it will reside, greatly increasing development costs. And just like the mobile browsers used in WAP banking, these standalone applications are vulnerable to attacks, have limited availability and can only accommodate customer-initiated communication.

As a financial institution prepares for the mobile banking revolution, it must weigh the advantages and disadvantages of these various solutions to decide which one best meets the needs of its customers and its own technology
infrastructure. In the next section, we’ll look at the specific mobile banking solutions of two leading banks.

Current Mobile Banking Providers

Banks are now customizing mobile banking services with customized software.

Although several financial institutions, including Wachovia, Washington Mutual, Wells Fargo and ING Direct, are launching mobile banking services, we are going to look at two of the largest and most developed -- Mobile Banking from Bank of America and Citi Mobile from Citibank.

Mobile Banking from Bank of America
Bank of America chose wireless application protocol as its technology platform. That means any cell phone with Web access can use the service -- without downloading any software. However, any customer who wishes to
use the mobile banking services must be set up in online banking. That’s because all transfer and payee information must be set up on a **PC** prior to making payments or transfers in Mobile Banking. Once these criteria are met, customers can:

- Access their checking, savings, **credit card**, **mortgage**, line of credit, loan and other Bank of America accounts
- Pay bills anywhere, anytime
- Transfer funds from one Bank of America account to another
- Locate branches or **ATMs**
- Get **maps** and directions

Bank of America advertises its Mobile Banking as free, but that doesn’t mean customers won’t incur costs. They will be charged access rates depending on their mobile carrier. Those who wish to use mobile banking regularly will be better off signing up for a data plan providing a certain allotment of data and text messages for a monthly fee. Such a plan is likely more cost-effective than paying for several one-off charges.

**Citi Mobile from Citibank**

Citibank opted for the application-based approach to its mobile banking offering. Like Bank of America Mobile Banking, Citi Mobile requires that users spend some time on a PC getting the service set up. Citi Mobile customers must also download software -- a custom, Citibank-branded interface -- to their phones. Here’s how the process works:

Citibank customers sign on to their online banking accounts and enter their **cell phone** numbers, the name of their wireless carriers, and their cell phone models. This information is necessary because the Citi Mobile application must be customized to the make and model of the phone.

After customers enroll, two text messages land in their cell phone inbox: The first with download instructions and the second with an activation key, which is required to set up the application on the phone.

Customers download and install the application to their phone, a process that takes about two to three minutes.
Next, customers launch the application and enter their activation keys and cell phone numbers to initiate the mobile banking service. They're ready to sign on. Every time they sign on, customers will need to enter their telephone access codes -- the same code they use to access Citibank’s telephone banking service.

The Citi Mobile interface provides access points into account information and activity, payments and transfers. It also allows users to find Citibank locations and to connect to customer service with a single click.

Citibank is looking to push the boundaries of mobile banking with some innovative cell phone trials. One trial, a partnership with MasterCard, AT&T and Nokia, involves placing near field communications (NFC) chips in certain Nokia phones. By passing the phone within a few inches of a reader, the NFC chip can be used to charge a payment to the user's credit or debit card. Such a payment is called an m-payment, an exciting concept in the world of mobile banking.

M-payments will be possible even when the phone’s user doesn’t have a bank account. In such a situation, a cell phone owner buys prepaid units from a mobile operator and then uses those units to pay for goods and services at a partnering service provider or retailer. Some see this type of transaction as a vital way to get basic financial services to populations in developing countries or in rural or remote areas, where people are more likely to have cell phones than bank accounts.

So perhaps a future commercial for mobile banking will not show an American woman hanging from a cliff in the Utah badlands, but a Kenyan villager using her cell phone to make a money transfer in downtown Nairobi.
UNION BANK OF INDIA

TECHNOLOGY

Union Bank of India has accepted this challenge and has positioned itself to opportunities that technology has thrown open. The opening up of the economy together with near total decontrol from the regulatory authorities has added impetus to our efforts. The transition from traditional banking to technology banking has already begun and a number of technology projects are under way and also envisaged for the future. The present and proposed IT initiatives of the Bank encompasses the following:

All the 2531 branches of the Bank are now under CBS. Leveraging on the CBS infrastructure Bank has centralized back office operations including clearing, account opening, statement generations etc. in over 30 centres.

This level of computerization has been possible because of the concerted efforts of 55 Regional Computer Cells. As the branches are far spread out the benefits of technology have now truly percolated to rural and semi urban areas also.

Forex operations are fully computerized at all 69 Authorized Dealing branches. This facilitates submission of various statutory returns minimizing the chances of default besides ensuring proper monitoring of international operations.

The Bank has set up a strong ATM network to extend the reach of banking services to the esteemed customers. Presently over 1200 ATMs spread out across India both Onsite and Offsite. All the ATMs are inter-connected through the Bank’s ATM Switch, thus facilitating on-line operations in case of CBS customers. The Bank is a member of Cash Tree and NFS consortium and also has bilateral arrangement with State Bank Of India, enabling the Bank’s ATM cardholder access to over 20000 ATMs across the country.
The Bank is issuing International Debit cards under Visa tie-up, thus offering global reach to its customers. All the ATMs of the Bank also accept Visa transactions.

Internet banking services of the Bank offers variety of features to make the Banking a pleasure. Some of the services offered online are single view of all the accounts, balance enquiry, account statement, transaction history, transfer of funds to self as well as third party accounts, request for cheque book, request for pay order/ DD etc.

Apart from the regular banking services as above, Internet Banking also provides other value added services such as online ticketing of air & rail, online tax payment, online trading of shares, online bill payments, online Demat information, online LC opening etc.

Telebanking has been introduced at 19 important centers for customers of CBS branches where facilities like balance enquiry, statement over fax, last five transactions etc. are available.

Bank has also introduced SMS banking services and is providing both Pull and Push services. Customer are now able to get alerts for all transactions happening in their account.

The service branches in about 40 locations fully computerized and networked to our WAN facilitating fast electronic transmission of data. Activities like clearing, account opening and statement printing etc. have been centralized at these centers. This has greatly speeded up realization of collection instruments and availability of float funds.

The Bank’s Payment Systems Gateway is in place with all the requirements that RBI has stipulated and PDO-NDS is operational from the Payment Gateway. The Bank has extended RTGS and NEFT facility to all CBS branches.

The Bank’s Payment Systems Gateway is in place with all the requirements that RBI has stipulated and PDO-NDS is operational from the Payment Gateway. The Bank has extended RTGS facility to all CBS branches. The Bank is also fully geared up for launch of SFMS at selected branches.

UBI Net connects all the Offices and branches of bank located in 2500+ centres, facilitating speedier transmission of MIS data (Network Map). The
network also facilitates the implementation of Core Banking Solution, apart from DEMAT services, Cash Management services, fund transfers, messaging system, etc.

The Bank is using VSAT network for connecting branches and ATMs wherever leased line connectivity is not feasible. We have over 1000 VSATs operational, connecting CBS branches/extension counters and ATMs.

Voice over IP between Administrative offices, Instant file/ Data transfer and corporate E-Mail, LAN is installed in all the administrative offices and important CBS branches.

Swift facility is available at 69 centers enabling faster transmission of messages pertaining to international financial/non-financial transactions.

**CORE BANKING**

Union Bank Of India has successfully implemented Core Banking Solution as a part of Long term IT strategy. The Bank has already rolled out all its branches covering over 100% of business under CBS. CBS system supports all retail and corporate banking activities including ATMs, Internet Banking, SMS Banking and Telebanking. Core Banking Solution has enabled customers to do trouble-free transaction and it is boon to customers as they are able to do 'Any Time, Any Where, Any Mode' banking. CBS has provided customers with best of Bank's products and accuracy in data transaction. This will enable Bank to give faster delivery of services across multiple channels of servers. Customers can use any of the channels available viz., branches, kiosks, ATMs, Telephone Banking, Internet Banking for their banking needs. The Bank's management information systems have now become enabled with the Core Banking System in place since the data now ends centrally. Business intelligence tools are able to analyze the data for decision support in a faster & more accurate manner. CBS will provide the customers a single view of their accounts on a real time basis.
Technology helps us in moving money, with this good news from Globe GCash, we can now connect our Globe GCash account to Union Bank Eon Card, you can now withdraw money from your GCash by transferring your funds to Union Bank and it also work the other way around Union Bank to Globe GCash. There’s a P7.50 charge per transaction and enrolling your GCash and Union Bank Eon Card to connect has a charge of P10 for a one time enroll. Transferring of cellphone load will be easy when you get funds via your Union Bank Eon Card or if you want to purchase something online that requires GCash payment, you can pay the merchant with a few keystrokes from your cellphone by transferring an amount of money from your Union Bank Eon Card, and the good part here is that your PayPal money can be transferred so easily to your GCash and thanks to Union Bank Eon Card for doing all the work with our emoney.

(MORE STORY BELOW)

GCash is a reliable platform and secured service in moving money and it is the convenient way for mobile banking and payments, and with partnership with Union Bank, everything will be smooth and easy, money on both system – bank and mobile. Both party will improve more on each of their
service and will deliver more benefits to all bankers and subscribers.

Most online shoppers and merchants use GCash as a mode of payment, it is very common to them transacting via over the counter payment and Gcash, with Union Bank and Gcash partnership, emoney will be have more value, because creating and earning is now easy.

For more details call Union Bank Customer Service at 84-186 to register your Globe number and nominated Union Bank account.

After that, you can now withdraw from Gcash to your Union Bank by texting G2U space to 2318
to load your Gcash wallet via Union Bank, all you have to do is text U2G space to 2318

and to inquire Union Bank balance, just text BAL to 2318
Top Up!
U2G to 2318

www.AzraelColadilla.com
CeeLite™’s Trade booth

CeeLite™’s Trade booth displaying the advantages and versatility of its Panels.
Caja Madrid bank

CeeLite™ LEC technology was used in a Caja Madrid bank, a large bank chain with over 1,900 offices in Spain. The LEC panels’ lightweight characteristics reduced installation and maintenance costs because the bank could self-install the signage in minutes. CeeLite™ LEC technology helped Caja Madrid create elegant signage to match the upscale environment of the bank, as opposed to traditional, bulky lightboxes.
**Octapharma**

Octapharma wanted to a space that would use minimal product graphics and limited video presentations. It wanted the exhibit space to stand out not shut out. Hence the ease of installation of CeeLite™ panels on the floors and walls illuminated and enhanced the space it was provided.

![Octapharma Image]

**Manheim**

CeeLite™’s Panels used to produce a large thin, lightweight overhead sign that is easy to install and reusable at any particular time.
OSRAM SYLVANIA

OSRAM SYLVANIA, together with CeeLite has reshaped the way we use light. OSRAM SYLVANIA’s higher performance materials together with CeeLite™’s LEC technology lights up this stunning booth.

CNN Headline News

CNN Headline News updates their contemporary set design by adding illumination to architectural details with CeeLite™ LEC Technology. The
LEC panels were easy to install without modifying the existing risers and set.

**NBA TV**

NBA TV adds accent lighting all over their stunning new set with CeeLite™ LEC technology. The CeeLite™ LEC panels simplify complex installations without adding heat which is a common issue with traditional lighting.