

## ‘Technology must benefit the common man’

Shri Arvind Sharma took over as the Director of IDRBT on November 10, 2005. He brings with him over 30 years’ experience in various facets of Information Technology and prior to joining as Director, Shri Sharma was Executive Vice President, L&T Infotech Limited. Earlier, he was the CEO of Intelligroup Asia and Unit Trust of India Investor Services and he has also been head of Oracle Consulting in India and CMC’s R&D Centre in India. He was the Chief Architect of many flagship IT projects in India such as Indian Railway’s Passenger Reservation System. Shri Sharma shared his vision and plans for the IDRBT with *Fast Forward*.

### Why did you choose a career with IDRBT?

I am convinced that IDRBT has the potential to make a significant contribution towards improving the quality of life of the common man. This Institute, I believe, has immense potential and provides the right opportunity to research and deploy technology cost effectively. IDRBT can positively impact life of the common man, and I am here to facilitate it.

### You were a member of the Saraf Committee that recommended the establishment of this Institute? Do you believe IDRBT has shaped up as originally envisaged?

The Saraf committee made quite a few recommendations on technology implementation in the Banking and Financial Sector, and setting up an Institute on Banking Technology was one of them. IDRBT is completing 10 years this year, and it is a good reference point to take a look at what the Institute has achieved.

The Banking Sector has moved on from those days of ‘Whether -IT-is-required’ to ‘IT-everywhere’, and IDRBT has played a critical part in this transformation. The Institute has offered many successful initiatives to usher in technology-enabled banking but I feel that it could have moved faster.

### Can you provide a peek into your plans for the Institute?

My focus is to fast forward this Institute from the development phase to the production phase by utilising the research work and subsequently incubating the work done so far. The benefits of the Institute’s work must reach out to the people on a larger scale and also at a much faster pace.



**NEW DIRECTIONS:** Arvind Sharma, Director, IDRBT

My keywords are ‘Inclusion Banking’ and ‘Common Customer Experience’. While pushing for productionising many of the incubated services, we will not dilute our focus towards research and new products/solutions for future.

### **Will the Institute be venturing into any new area/s of research?**

As I said, we need to reach out to a larger number of our citizens and across geographic regions. The Institute's research needs to be focused to provide us this impetus. Rural Micro-Finance would be a core area of focus for we need to play a role in bridging the gap between the urban and rural banking facilities.

We would also be working on multiple channels such as ATMs, Cell-Phone Based Banking, e-Valet, e-Cheque and e-Learning, to help the Banking Sector spread its reach to far-flung areas.

### **Can you elaborate on your plans on bridging the urban-rural gap?**

Credit has not reached the right persons in right measure and there is an urgent need to manage rural credit better. This will stop migration from rural areas by creating more employment in rural areas. Self-help groups and NGOs are doing their bit but technology has to come in in a big way. Banking services have to reach and benefit the rural populace.

Rural India should not be at the mercy of moneylenders and benefits of the credit policy will have to reach the masses. IDRBT has to develop appropriate technologies that can be successful in the rural areas. To begin with, we will focus on areas such as the North East.

### **Any new initiatives on the anvil to meet the manpower requirements of the Sector?**

We will have a two fold approach - training the in-service professionals of the Banking sector and creating new professionals with appropriate skills in Banking Technology and Security. The number of Executive Development Programmes would be increased and we are planning to launch a series of Certificate Programmes using e-learning platform to reach out to the bankers and enable them to log in and study at their convenience. The aim is to emerge as a Cyber University.

### **Do you see any role for IDRBT in HR Initiatives related to the IT staff?**

Though Technology is transforming Banking, IT staff still do not constitute the mainstream. The Institute can play the role of a catalyst in ensuring that the IT staff are not at

a disadvantage and their importance is duly recognised. There is a need to have a proper cadre for IT professionals in Banking.

### **With banks logging on to technology, security is emerging as a key concern? What role do you see the IDRBT playing in this area?**

IDRBT has pioneered Security in the Banking Sector through its INFINET based services such as mail messaging and secure data communication using encryption. Another major contribution is CA-PKI Services and we have issued the largest number of Digital Certificates in the country.

Now, we need to build on this excellent start and move towards ensuring Security in the entire workflow of banking and financial services. We are working towards this and Biometrics may be a crucial component of our plans.

### **IDRBT could also contribute towards standardization across various technologies in the sector?**

Most solutions deployed in banks are vendor-driven and there are different museums of technology. It's time to move ahead from these islands of automation and take a holistic view. Members of the Banking Industry need to work as per a plan and there has to be a blueprint. Our Consulting Services will address this need.

Further, the time for standardization of technology plan for Indian Banking and Financial Sector has arrived. Moreover, we need to go indigenous. India is the global fountainhead of IT but Visa, MasterCard and SWIFT are still doing roaring business in India. This has to change.

### **IDRBT has three core areas – research, academics and technology services. Do you believe these activities should be segregated for better focus?**

IDRBT has incubated these three areas and it is time to expand, grow and branch out. The technology services can be hived off but there are a few prerequisites. All service offerings must be robust, commercial grade and scalable. They have to be financially viable. The new entity will have to rapidly scale up its activities because it has to work in a competitive environment.

The systems and processes have to be robust and the quality of service has to be excellent. The 24x7 working

system with Business Continuity Plan has to be in place along with delivery of cost-effective services, measurable on various service parameters.

#### Where do you see this Institute after five years?

This Institute must provide solutions that can obviate the need for the Indian Banking and Financial Sector to depend on foreign vendors. In fact, IDRBT should be able to meet the needs of the Asian and African countries.

Recently, I was at the International Seminar on Payment

Systems, and many foreign delegates were looking forward to IDRBT to provide solutions. There is a lot of scope for extending the solutions / services outside India and it depends on us how fast we can scale up and meet the demands.

To be precise, IDRBT, in the next five years must emerge as a Centre of Excellence in Banking Technology Research and as a major player in developing cost effective technologies for Banking and Financial services.

## National Financial Switch

Presently, the National Financial Switch connects 18 banks - Allahabad Bank, Andhra Bank, Bank of Baroda, City Union Bank, Corporation Bank, Development Credit Bank, ICICI Bank, IDBI Bank, Oriental Bank of Commerce, Punjab National Bank, Tamilnad Mercantile Bank Ltd., The Dhanalakshmi Bank Ltd., The Jammu and Kashmir Bank Ltd., The Karnataka Bank Ltd., The Karur Vysya Bank Ltd.,

The South Indian Bank Ltd., The United Western Bank Ltd., and YES Bank Ltd.

The NFS Network now has over 5600 ATMs, which is the largest number of ATMs under a single network in the country. The Daily Average Transaction Volume on the NFS network is around 17,000. The SBI, UTI Bank and few other banks are likely to join from 1<sup>st</sup> April 2006 and bring in about 7000 additional ATMs to the NFS Network.

## Structured Financial Messaging System

The Institute has released SFMS Version 3.0 and its salient features include:

**Common Gateway Branch Server:** The Gateway and Branch Server modules are combined in one server, thus helping the banks to save costs incurred on hardware, software and also reduce overheads.

**Proliferation of IFSC Codes:** Now, SFMS supports adding new IFSCs from Hub and IFSCs get automatically updated at the Gateways and corresponding Branches. This facility also supports adding the IFSCs of RTGS & thus enables SFMS users to send RTGS related messages.

**Auto Installation:** The SFMS offline software provides auto installation of third party products. Similarly, the auto installation of SFMS Branch Server Module is also available, which will drastically reduce the time taken by banks for installation in branches.

**User-Friendly:** Upgradation of SFMS Software with new version is more user-friendly. Further, the software has

been substantially improved by taking into account all requirements and suggestions of banks. Thus, the latest version offers more functionalities to cater to the need of modern banking and financial services.

**Security:** The Secure File Transfer feature permits banks to transfer any file securely using PKI. Moreover, the software provides for archival of messages at every node, thereby helping the banks in utilizing the data for generating MIS reports. SFMS also supports securities-related messages compatible with SWIFT standards.

**Government Transactions:** SFMS supports Government Transaction Messages (298 G Series messages). Banks can exchange various government reports through these messages.

**NEFT & SFMS:** On Nov. 21, 2005, the RBI has implemented NEFT, the electronic funds transfer system, developed by IDRBT using SFMS as a messaging backbone. It provides PKI security standard for transfer of funds through EFT for the participating SEFT banks.

SFMS Gateways have already been installed in 40 banks so far, besides Reserve Bank of India. These banks are Andhra Bank, Allahabad Bank, Bank of Maharashtra, Bank of India, Bank of Baroda, Canara Bank, Central Bank of India, Corporation Bank, Dena Bank, Indian Overseas Bank, Indian Bank, Oriental Bank of Commerce, Punjab National Bank, Punjab & Sind Bank, State Bank of India, State Bank of Saurashtra, State Bank of Bikaner & Jaipur, Syndicate Bank, UCO Bank, United Bank of India, and Vijaya Bank.

The private sector banks in which the SFMS Gateways

have been installed include Catholic Syrian Bank, ICICI Bank, HDFC Bank, HSBC Bank, ABN Amro Bank, Citi Bank NA, IDBI Bank, Yes Bank, Bank of America, IndusInd Bank, Kotak Mahindra Bank, ING Vysya Bank, Standard Chartered Bank, UTI Bank, Karur Vysya Bank, Deutsche Bank AG, Centurion Bank of Punjab Limited, The United Western Bank & The Sangli Bank Limited.

**SWIFT Bureau:** IDRBT would be launching a Service Bureau for SWIFT Users in India shortly. SWIFT has accorded formal approval and IDRBT has initiated action to put in place the SB soon.

## IDRBT Certifying Authority

IDRBT Certifying Authority (IDRBT CA) has issued 34,328 Digital Certificates (12,260 for Class 1; 20,053 for Class 2; and 2015 for Class 3), as on February 28, 2006. Banks/Financial Institutions are using the certificates issued by IDRBT CA for RTGS, CFMS, Corporate E-mail, SFMS, Internet Banking Web Server, OLTA and CCIL settlement applications.

Further, till date 115 Registration Authority (RA) Offices have been created covering 26 Public Sector Banks, 19 Private Sector/Foreign Banks and 5 Financial Institutions. These also include 16 RA Offices created for SBI. 40 RA

Offices for all Regional Offices and Central Office Departments of RBI are also in operation. IDRBT serves as the RA Office for banks and financial institutions, which do not have an RA. Till date, over 3350 certificates have been processed through this RA office.

The Disaster Recovery Site of IDRBT Certifying Authority is operational at Clearing Corporation of India, Mumbai, and critical services like LDAP are now available on DRS. Database Recovery from the production set up and certificate generation from Disaster Recovery site are being tested periodically.

### Book Point



### Human Resource Management

**Authors:**

*Dr. P. Jyothi & Dr. D.N. Venkatesh*

**Published by :**

*Oxford University Press, 2006*

Acquiring human resources, developing competencies of human resources, and employer-employee relations are the three key components of Human Resource Management. This book explores these core concepts through managerial applications and supplements them

with detailed case studies from the perspective of the Indian Banking Industry.

The entire gamut of Human Resources including employee planning, job analysis and design, recruitment and placement procedures, training and development, management development, need and importance of performance appraisal, compensation packages, incentive plans and fringe benefits, industrial relations, collective bargaining, and employee safety and health are dealt with in-depth in the book.

The book also discusses the roles of knowledge worker, human resource manager and human resource department, and the impact of globalisation on human resource practices, career management and development, and human resource accounting and audit practices.



## Conference of Business Heads on Beyond Core Banking – Data Warehousing and Risk Management

The Institute organised a Conference of Business Heads on Beyond Core Banking – Data Warehousing and Risk Management, on October 04, 2005, to discuss the various issues and challenges in getting the Sector ready for Data Warehousing, Risk Management and Basel II Compliance. Over 40 delegates, most of them in the rank of General Managers and Dy. GMs from various banks, participated.

Shri R. Gandhi, In-charge Director, initiated the proceedings by briefing the delegates that the conference is designed as a step to discuss and deliberate the latest in the fields of Data Warehousing and Risk Management, especially in the context of Basel II. “The Institute would be conducting such conferences, periodically, over various other issues of importance, to aid the sector in its effort to reap maximum benefits from technology,” he informed.

Dr. R. B. Barman, Executive Director, RBI, in his inaugural address urged the banks to think beyond Core Banking and get prepared for the implementation of Basel II in the right earnest. He provided a walkthrough on Risk Management in Banks and the efforts taken by the RBI in conceptualising Data Warehousing since 1999. He pointed out that the “pace of financial innovations is accelerating due to globalisation and deregularisation of financial markets, and there is an increasing demand for information on such new instruments. So a Data Warehouse architecture should be flexible enough to accommodate new data needs.”



**FIRST THOUGHTS: R. B. Barman and R. Gandhi**

Dr. P. Radha Krishna, Faculty, moderated the next session on Data Warehousing and Data Mining. Shri T. R. Deepak, Head, Business Solutions Group – Retail, HDFC Bank,

shared experiences of implementing Data Warehouse in HDFC Bank. He explained the entire process right from Source System Extract, Data Loading, and Data Transformation to Profitability Analysis. He analysed the transactions through various channels such as ATM, Branch, Telephone, Internet, and Mobile and also demonstrated the system set up.



**DATA FOCUS: Mukesh Mohania, Joydeep Dutta,  
P. Radha Krishna, V. Ravi and T. R. Deepak**

Shri Joydeep Dutta, Jt. General Manager, ICICI Bank, explained the ICICI Bank’s approach to Data Warehouse and enumerated the various steps involved in setting up a successful Data Warehouse. These include Feasibility Study, Vendor Evaluation, Business Discovery, Logical Data Modelling, Data Analysis, and Physical Database Design. Dr. V. Ravi, Faculty, IDRBT, then presented the various methods for Exploiting Data Mining for Efficient Banking through the examples of various multi-national banks.

Dr. Mukesh Mohania, Manager, IBM India Research Lab, offered a view of the Best Practices and Approach to Data Warehousing. Stressing that Business Intelligence is becoming mission critical, he cited the cases of Mid-Atlantic Regional Bank, Bank of America and one of Canada’s largest banks, and laid out key responsibilities and quality considerations for smooth Data Management.

Shri. Cherian Varghese, CMD, Union Bank of India, began the post-lunch session with the keynote address on Risk Management and Basel II Compliance. Stating that Basel II has provided a comprehensive approach to manage risks for the banking system, he elucidated a three-pillar



**TOWARDS BASEL II: Cherian Varghese presented a Three Pillar Approach**

approach to risk management adopted by Basel II. He drew a comparison between the two capital accords on Basel I and Basel II with detailed arithmetic examples.

“All the requirements under the three pillars of Basel II can be met only if banks have a robust and reliable MIS. Technology needs to play a crucial role in implementation of Basel II. It has to play a supportive role in enabling banks to access and use data in a meaningful manner so that demands of Basel II can be met in a cost effective manner,” he said.

The focus of the next session was on Risk Management and Basel II Compliance. Dr. V. P. Gulati, Consulting Advisor, Tata Consultancy Services, charted out the key players and their functions for ensuring a smooth Basel II Compliance in the country. He spelt out the roles for the Regulator, Bank Managements, Functional Process

## Workshop on Development of Payment and Settlement Systems

IDRBT conducted a Workshop on Development of Payment and Settlement Systems, on August 8, 2005. The workshop was conducted in the backdrop of the Committee on Payment and Settlement Systems (CPSS)



**INVITING IDEAS: Kaza Sudhakar, S. Sankara Subramanian and M.V. Sivakumar**

Owners, Data Owners, IT Team and also the issues that they are likely to face and how they could be overcome successfully.

Dr. G. P. Samanta, School of Management, IIT Bombay, then discussed the Best Practices & Approach to Risk Management. Focusing on both Banking Risk and Credit Risk, he spelt the difficulties in managing such risks and made a case for Bank-wide Integrated Risk Management. Shri B. M. Mittal, General Manager, Punjab National Bank, presented the various IT Challenges that the Banks are likely to face while implementing Basel II and Data Warehouse. Shri D. P. Dube, Faculty, moderated this session.



**ON MANAGING RISKS: B. M. Mittal, V. P. Gulati, D. P. Dube and G.P. Samanta**

Shri V. Visweswar, Conference Coordinator, proposed the vote of thanks.

of the Bank for International Settlements (BIS) publishing its latest consultative report on General Guidance for Payment System Development (GGPSD) in May 2005 and inviting comments from the central banks across the world.

This workshop was convened to discuss the issues highlighted by the GGPSD, with top executives from ten major banks and a few technology solution providers in this area and to provide feedback to the RBI so that they can incorporate these views/suggestions in the comprehensive country response to be sent to the BIS. Shri Kaza Sudhakar, GM, DPSS, RBI, participated in the workshop and actively guided the deliberations.

Inaugurating the workshop, Shri S. Sankara Subramanian, CGM, emphasized the critical role of payment systems and that of the RBI as the major driving force. The RBI has been taking several initiatives targeted at improving the efficiency of the nation's payment and settlement systems in line with international standards. In fact, the central bank has come out with its vision documents for Payment Systems and also Financial System Technologies. The focus is now on Triple S + E, i.e., Safety, Security, Stability and Efficiency, he pointed out.

**Focal Areas:** The GGPSD had grouped its fourteen guidelines under four broad areas which play a crucial role in development of a national payment system, as follows :

#### A. Banking System

- ◆ Keep the Central Bank at the Centre
- ◆ Promote the role of a sound banking system

#### B. Planning

- ◆ Recognise complexity
- ◆ Focus on needs
- ◆ Set clear priorities
- ◆ Implementation is the key

#### C. Institutional Framework

- ◆ Promote market development
- ◆ Involve relevant stakeholders
- ◆ Co-operate with other authorities
- ◆ Promote legal certainty

#### D. Infrastructure

- ◆ Retail – give more choice to more people
- ◆ Large Value – business case leads, technology follows
- ◆ Securities – plan securities and payment systems together
- ◆ Retail, large value and securities – co-ordinate settlement

**Recommendations:** Each of these areas was discussed by a separate panel. Resource persons from IDRBT - Shri M V Sivakumaran, Faculty; Dr. Mahil Carr, Faculty; Shri R Mani, DGM; and Shri V Gunasekaran, DGM; were the moderators for the four panel discussions respectively and after due deliberation the following recommendations were made by the workshop:



**THE PROS & CONS: A panel deliberates on National Payment System**

- There is a need for defining National Payment and Settlement Systems so that these guidelines may be made applicable to them.
- The central bank could consider provision of regulatory incentives to encourage the use of payment systems infrastructure services backed by risk mitigation.
- Include non-banking organisations, with appropriate regulation, to play active role in the development of payment systems, to provide for market depth and penetration.
- Review mechanism to be incorporated in the guidelines. Institutionalise the review mechanism itself to provide for corrective measures, wherever necessary.
- Since the legal system may take more time to evolve to meet the emerging requirements, the regulator may issue appropriate guidelines to support development of payment and settlement systems.

Shri R. Gandhi, In-charge Director, in his concluding remarks, said that the CPSS guidelines were generic in nature, meant to serve as a useful aid in designing payment systems and hence may not be country specific. He also pointed out the need for defining a National Payment System as part of the guidelines. The role of non-banking organisations in development of payment systems had to be spelt out clearly, he said.

Heads of IT, Business Development, Payment Systems, from major banks and vendor representatives participated in the workshop, which was coordinated by Shri M. V. Sivakumaran, Faculty, IDRBT.



## Programmes Review

### Workshops on SFMS

The Institute organised seven workshops including a Customised Workshop for the Syndicate Bank on Structured Financial Messaging System since July 2005, training over 200 participants from various Banks and Financial Institutions.

Based on the feedback of the participants of the earlier SFMS workshops, some of these workshops were offered in two modules. While the first module, spread over the first two days of the workshop, trained the Branch Users of SFMS and focused on Message Creation, Verification & Authorization, Module II spread over the last two days was designed to meet the needs of Technical Staff/System Administrators and Implementers of SFMS.



**Participants of SFMS programme conducted from Feb 06 - 09, 2006**

Trainers, DIT Personnel and others requiring a total understanding of SFMS, attended the complete workshop. Shri R. Mani, DGM, coordinated all seven workshops.

### Internet Banking

A six-day programme on Internet Banking was organised from August 01–06, 2005.

Various issues such as Structure of Internet Banking, Risks and Controls, Technology and Security Standards, Legal and Regulatory Concerns, Internet Security Architecture Options, Security Products, Deployment Issues, Policy and Procedures of Internet Usage, and Connectivity issues were some of the areas deliberated upon. Case Studies were used extensively during the programme.

Shri. D.P.Dube, Faculty, co-ordinated this programme, which was attended by 20 participants from various Banks and Financial Institutions.

### IT Administration for Reserve Bank of India

The Institute organised two customised programmes on IT Administration for the Reserve Bank of India, from August 01-06, 2005 and August 30–September 03, 2005.



**Participants of IT Administration programme conducted from Aug 30 - Sep 03, 2005**

Right from the Basics of Communication Equipments such as Routers, Switches and Administration, Internet Protocol, Role of System Administrators, Configuration and Troubleshooting of Routers & Operating Systems, Microsoft Exchange Administration, Patch Management, End Point Security and Perimeter Security, Intrusion Detection System, Firewall, Web Technologies, MQ Series Administration, ISDN to various RBI Applications such as PDO NDS & RTGS etc., the participants were trained in the entire gamut of IT Administration.

Shri. N. Rajendran, DGM, coordinated both the programmes, which had a total of fifty-five participants.

### Business Continuity and Disaster Recovery Plans

The programme on Business Continuity and Disaster Recovery Plans, spread over three days from August 29 – 31, 2005, was designed to equip and train the participants in various areas related to BCP & DR, Database Recovery, Security Policy, DRS for Network and Communication System, etc.





This programme suggested ways and means for effective implementation of Business Continuity and Disaster Recovery Plans from a Bank specific point of view and focused on sharing the best practices adopted by various organisations for similar implementations.

Dr. Mahil Carr and Dr. M. R. Patra, Faculty, co-ordinated the programme.

### **New Payment Technologies and Trends**

The Institute organised two programmes on New Payment Technologies and Trends from September 12–17, 2005 and January 16-20, 2006.

These programmes exposed the participants to various issues related to the Evolution of Payment Systems, ATM Networks, Internet Banking, Utility Bill Payments, Card



**Participants of the programme conducted from Jan 16 - 20, 2006**

Based Payment Systems, Net Based Payment Systems, Electronic Cash, Electronic Instruments like e-cheque, Payment Gateways, Regulation of Payment Systems, Legal aspects of Payment Systems, Theft of Electronic Money, Money Laundering including Cyber Money Laundering, Audit and Security of Payment Systems.

Dr. V. Radha, Faculty, co-ordinated both these programmes.

### **Seminar on Cyber Security for Financial Services**

The Institute in association with the Standardisation Testing Quality Certification (STQC) and Confederation of Indian Industry (CII) organised a Seminar on Cyber Security for Financial Services on September 15, 2005 at Mumbai. The seminar was organised under the aegis of the Indo-US Cyber Security Forum

FISMA - Acts and Guidelines; Acts, Regulations and Polices Prevalent in India; Legal and Regulatory Framework; Supervisory Controls, Framework of Security



**R. Gandhi and Usha Thorat (third and fourth from left) at the seminar**

Assurance and Compliance, Challenges in E-Transactions and Protecting the Critical Information Infrastructure; Role of Card Business & ATM Outsourcing and Managing IT Risks & RBI Guidelines were among the issues deliberated upon.

Shri V.Visweswar coordinated the seminar.

### **Information Systems Audit**

This six-day programme, organised from September 19–24, 2005, trained the participants in various areas of IS Audit.

The subjects of focus included IS Audit Fundamentals, Process, Planning and Management, COBIT and IT Governance, Application Controls, Network Security, Operational Controls, Risks and Controls in Delivery Channels, Information Security and PKI, Computer Assisted Audit Tools and Techniques, Outsourcing – Concerns & Controls, Business Continuity and Disaster Recovery Planning, Evidence Collection and Evaluation, Information Security Policy, etc.

Shri. M.V.Sivakumaran, Faculty, co-ordinated this programme, which had seventeen participants.

### **Advanced Security Trends**

The Institute organised two programmes on Advanced Security Trends from September 26–28, 2005 and January 23-25, 2006.

Security Requirements of Banks and Financial Institutions, Security Technology Trends, Guidelines on IT Act 2000, Amendments to IT Act 2000, Security Algorithms, Evolving Security Policy Lifecycle, Upcoming Technology Trends including Data Encryption Standards, Smart Cards, Biometrics, Intrusion Detection, Firewall, Business



**Participants of the programme organised from Jan 23 - 25, 2006**

Continuity and Disaster Recovery were among the topics discussed.

Dr. Ashutosh Saxena and Dr. M.V.N.K. Prasad, Faculty, co-ordinated both the programmes.

### **Networking Technologies for Canara Bank**

Three Customised Programmes on Networking Technologies were organised for the Canara Bank from October 03–08, 2005, December 05-09, 2005 and January 02-06, 2006.

The programmes focused on various areas such as Networking Concepts, Internet Protocol, Configuration of Routers, Firewall, Basics of Communication Equipment, L2, L3 Switch Configuration and Management, HP Open View, IDS/IPS, Configuration of Routing Protocols, RIP & OSPF, CISCO Works, ISDN Back-up Configuration, Cryptography, Public Key Infrastructure, EnDeSign, Firewall, IS Security Audit, BCP and Disaster Recovery.



**Participants of the customised programme organised from Jan 02 - 06, 2006**

105 participants were trained in these three programmes coordinated by Shri. N. Rajendran, DGM.

### **Secure Card Payments through Mobile SIMs**

This one-day workshop on Secure Card Payments through Mobile SIMs was organised at the Institute on October 21, 2005.

The workshop deliberated upon the entire gamut of Payment through SIMs, including its business potential. IDRBT is carrying out a collaborative project on Protocols and Security Framework for Mobile Payment System along with the Ministry of Communications and Information Technology, Govt. of India, and the findings of the project were presented in the workshop.

A Mobile Payment System was demonstrated to the delegates and there was also a Panel Discussion on Mobile Payment – Business and Regulatory Issues.



**Participants trying out the Mobile Payment System**

Dr. Ashutosh Saxena and Dr. Mahil Carr, Faculty, co-ordinated the workshop.

### **PKI and Digital Certificates**

In an effort to provide a first-hand understanding of PKI and Digital Certificates, the Institute organised a workshop focussed on providing hands-on experience, from August 16–18, 2005.

Public Key Infrastructure, Certifying Authority Services, Smart Cards Technology, Network Security and PKI, VPN, and other Applications, Internet Banking, Online Certificate Application, Certificate Management, Workflow Demonstration were some of the areas of in-depth focus.

A Customised Workshop on RA Administration and Digital Certificates was also organised for Bank of Baroda on October 26, 2005. Dr. N.P.Dhavale, DGM, co-ordinated both the workshops.

### **Financial Risks and Asset Liability Management**

The Institute conducted a six-day programme on Financial Risks and Asset Liability Management from November 07–12, 2005.





Right from the basics of various Financial Risks and ALM, Basel Committee Framework, ALCO, GAP and DGAP Analysis, Integrated Financial Risk Analysis, ALM and Risk Models, Multi-Criteria Decision Models, Neural Network and Fuzzy Risk Models, Credit Risk, Operational Risk, Forex Risk, Computation of Market Risks, Valuation and Asset Pricing Models, Investment Models, to Simulation and Forecasting Techniques, the programme provided an overview of the entire gamut of Financial Risks and Asset Liability Management.

Dr V. N. Sastry, Faculty, co-ordinated this programme.

### **Data Warehousing and Data Mining**

A three-day programme on Data Warehousing and Data Mining was organised from November 16–18, 2005.

Data Warehousing, Data Transformation Services, OLAP, Data Mining, Financial Data Modeling using Factor Analysis, Discriminant Analysis, Logistic Regression, Cluster Analysis, Decision Trees, CART, CHAID Analysis, and Data Mining Applications for Banking were some of the areas focused upon. A case study on Data Warehouse Implementation was analysed and a Prototype Datamart was also demonstrated to the participants.



Dr. P. Radha Krishna and Shri. Arijit Laha, Faculty, co-ordinated the programme.

### **Information Security Awareness for Senior Management**

The Institute conducted a programme on Information Security Awareness, exclusively for the Senior Management, from December 19–21, 2005.

The programme sensitised the delegates on Information System Security, Network Fundamentals and Security, Access Control Techniques and Models, Firewall and Intrusion Detection System, COBIT, Business Continuity and Disaster Recovery Plans, Delivery Channels, Security and Control in ATM Operations, Internet Banking, and the Best Practices in Information Security Incident Management.



A case study on Information System Security Deployment in the Bank was also deliberated upon during the programme.

Shri. D.P.Dube, Faculty, co-ordinated the programme.

### **Payment Systems and Security Technologies**

A programme on Payment Systems and Security Technologies was organised from December 26 – 28, 2005.

The objective of the programme was to discuss issues related to Security in Electronic Payment Systems, Risks associated with Payment Systems and their Management, provide a broad overview of the Technology Infrastructure required for an Effective Payment System, Legal and Statutory Framework to define rights and liabilities of the parties involved in the Payment System, Present the Cryptography System /Trust Architecture for Secure Payment Systems and deliberate on various Security Technologies apart from discussing issues related to Smart Cards & Smart Card Based Payment Solutions.

Shri. D.P.Dube, Faculty, co-ordinated the programme.



## Sponsored Seats in M.Tech. (IT) with specialisation in Banking Technology and Information Security

IDRBT offers a two-year fulltime M.Tech. in Information Technology with specialisation in Banking Technology and Information Security. The course, approved by the AICTE, is being conducted in collaboration with the Central University of Hyderabad, since 2001.

The annual intake for the course is 25 candidates, out of which five seats are exclusively for sponsored candidates from Banks and Financial Institutions. Various Banks such as Bank of Maharashtra, Bank of Baroda, and IDBI Bank have availed this opportunity and sponsored their eligible staff in the previous years.

Responding to the changing needs of the Banking and Financial Sector, the syllabus of the course has been modified suitably to meet the sector's current requirements. The specific curriculum details, spread over two semesters in the first year and one year of project work are:

**Semester I:** Banking Technology, Cryptography, Computer Networks and Distributed Computing, Advanced Database Management Systems, Quantitative Techniques in Finance, Java and Scripting Languages Lab

**Semester II:** Systems Security, Software Engineering, E-Commerce and Payment Systems, Network Programming and Web Services Lab, Any Two Electives

**Electives:** Soft Computing in Finance, Data Warehousing and Data Mining, Sensor Networks and Embedded Systems, Middleware Technologies.

**Project:** The candidates carry out a Project focused on the Banking and Financial Sector in the second year.

### Eligibility

First Class with a minimum of 60% marks in B.E./B.Tech./MCA or First Class with a minimum of 60% marks in Masters Degree in a subject related to Mathematics/Statistics / Information Systems / Information Technology / Physics / Electronics / Computer Science. Regular candidates require GATE qualification with 60 percentile but sponsored candidates are exempted.

While regular candidates have to take a written test and interview, sponsored candidates are exempt from written test. Sponsored candidates are selected based on their performance in the interview.

Banks and Financial Institutions may send nominations of their sponsored candidates for admission in the 2006-08 batch latest by May 15, 2006 to Dr. V.N.Sastry, Coordinator, Academic Affairs or Dr. V. Ravi, Faculty In-Charge, M.Tech. (IT), at the Institute's address. For details, please mail to [vnsastry@idrbt.ac.in](mailto:vnsastry@idrbt.ac.in) / [vravi@idrbt.ac.in](mailto:vravi@idrbt.ac.in) or contact them on 040-23534981 to 84, Extn 2031/2042.

Further, look out for the admission advertisement of University of Hyderabad, which would be released shortly in leading newspapers. Banks/Candidates can also visit the website of IDRBT at <http://www.idrbt.ac.in> and University of Hyderabad at <http://www.uohyd.ernet.in>.

### Governor, State Bank of Pakistan visits IDRBT

Dr. Ishrat Husain, Governor, State Bank of Pakistan, visited IDRBT on October 07, 2005. He had a one-to-one meeting with the Director to update himself on the activities and priorities of IDRBT. He then met the Faculty members of the Institute and discussed about various research activities of the Institute.



**DIRECT APPROACH:** Dr. Ishrat Husain (second from right) visiting various facilities at the Institute

He pointed out that an Institute like IDRBT exclusively focused on Technology in Banking provides a great impetus to the Banking and Financial Sector, especially when technology was emerging as the crucial differentiator. Pakistan should also have an Institute like IDRBT and possibilities of collaborating with IDRBT needs to be explored, he said.

Later, he visited the various facilities at IDRBT and complimented the Institute for its various initiatives such as INFINET, Certifying Authority, etc.

**SPEARHEADING TECHNOLOGY ABSORPTION IN BANKING**

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