



IDRBT

The Think - Tank for Banking Technology

FAST FORWARD

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from



Institute for Development and Research
in Banking Technology

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INDIAN FINANCIAL NETWORK (INFINET)

Historic Inauguration

Infrastructure for Banking Technology in India took a big leap forward on Nineteenth June 1999. It was on this day the countrywide communication backbone for Banks and Financial Institutions, aptly named INFINET (INDian FINancial NETwork) was inaugurated by Shri.S.P.Talwar, Deputy Governor, Reserve Bank of India. The glittering inaugural function organised in IDRBT Auditorium was attended by Dr. A.Vasudevan, Executive Director, RBI, Members of the Governing Council of IDRBT, Top Executives from Banks and Financial Institutions, leaders from the I.T industry, Senior Officials from the State Government of Andhra Pradesh and other invitees.

Dr.V.P. Gulati, Director, IDRBT, welcomed the



Dr.Gulati, Director, IDRBT, offering a floral welcome to Shri.S.P.Talwar, Deputy Governor, RBI at the Inaugural Function . Dr. A.Vasudevan, Executive Director, RBI and Shri.K.R.Ganapathy, GM, IDRBT, look on.

gathering. In his speech he pointed out that in the First Phase INFINET would have around 450 VSATs connecting the Branches and Offices of Public Sector Banks, SBI and its Associates and the Reserve Bank of India. The Network is scalable and can accommodate up to 1000 VSATs, as of now, he said. While the required infrastructure has been installed, with adequate redundancy, we are working on the Network

THE RBI GOVERNOR'S WISHES...

"It is a very very impressive performance on the part of all those who have worked on this VSAT Network project.. I must congratulate you (Shri.Talwar), Dr.Vasudevan and the Governing Board of IDRBT, in particular, for undertaking this initiative and for having brought it to a point where we can all show to our colleagues not only here but everywhere else in the world, the state to which Indian Technology has brought the Banking Sector forward to...We are very very proud of this achievement and the Reserve Bank is fully committed to provide all help to IDRBT in this project...and I look forward to further progress in this because in the new millennium, as all of us know, this is going to be the transaction medium...We have to provide maximum help to the entire Banking System through this Network to put through transactions at least cost and in the most efficient way so that our Customers can benefit from this. My heartiest congratulations to Dr. Gulati and his team at IDRBT for all the efforts they have put in to bring it to this stage."

- Excerpts from Dr. Bimal Jalan's speech through the video conference during the Inauguration of INFINET.

Architecture for Backup and Disaster Management, he said. He informed the distinguished gathering that since the infrastructure building activities are almost over, IDRBT is now very well poised to take up academic and research activities in full swing from July 1999. Stressing the role envisaged for IDRBT, as the Think - Tank for promoting technology solutions for Banking and the Financial Sector, he outlined the projects and other activities that are being taken up by IDRBT. He introduced the chief guests to the gathering and sought the guidance and cooperation from all concerned to make INFINET a grand success and to make IDRBT an International Centre for Excellence in Banking Technology.

Shri. S.P.Talwar, Deputy Governor, RBI, in his inaugural speech complimented all the key players - IDRBT, RBI, Hughes Escorts Communications Ltd. and CMC Ltd. - for the successful completion of INFINET Project. "The INFINET stands for our commitment to utilize the best of leading edge technology to enable the banking sector to achieve international standards. With the operationalisation of the INFINET, one of the biggest bottlenecks of our times, the lack of connectivity of banks, would be eased to a great extent", he said. He also emphasized that "by providing a means for quick, safe and efficient movement of funds and information, INFINET would help to improve the effectiveness of monetary policy". He further pointed out that INFINET will open up a whole new world of possibilities like transmission of data for warehousing purposes, offsite surveillance, MIS from branches to controlling offices and RBI. He hoped that INFINET would also act as a catalyst in improving the pace of computerization in the banking industry, by offering the benefits of intra-bank and inter-bank connectivity, which can improve customer service to a great extent.

Later Shri. S.P.Talwar inaugurated the INFINET by having a video conference with Dr.Bimal Jalan, Governor of the Reserve Bank of India, from his office in Mumbai. Dr. Bimal Jalan congratulated the entire team and wished INFINET all success. Dr.Y.V. Reddy and Shri. Jagdish Capoor, Deputy Governors of RBI also participated in the video conference and conveyed their greetings on this happy occasion.



Dr. Bimal Jalan, Governor, RBI, (on the screen at left) wishing INFINET all success, through the video conference.

Dr. A. Vasudevan, Executive Director, RBI, in his keynote address said the INFINET gets the distinction of being a forerunner of an efficient telecommunications backbone for the Banking and Financial Sector. Speaking on the Impact of INFINET on Banking, he said that it would play a key role in inter-city Electronic Clearing Service (ECS), Electronic Funds Transfer (EFT), Centralised Funds Management System (CFMS), Centralised Funds Enquiry System (CFES) and the proposed Real Time Gross Settlement (RTGS) System. If the INFINET could help in reducing the delays in inter-city cheque collections by faster communications of realization advices, it will go a long way in improving the efficiency of the National Clearing Cells of the RBI, he said. He hoped that Networking of ATMs and more reliable MIS may also be the beneficial spin-offs when the INFINET spreads its wings far and wide.

The memorable function came to a close with a Vote of Thanks by Shri.K.R.Ganapathy, General Manager, IDRBT, who is the coordinator for the INFINET project.

Conference of CPPD Chiefs on Issues Related to INFINET

The inauguration of INFINET was followed by a two-day Conference of CPPD Chiefs of all Public Sector Banks at the Institute on 21st and 22nd June 1999. The Conference was attended by 31 Executives and I.T. Officials from Banks. Some major Action Points that emerged from this conference were:

- ◆ To ensure optimum utilisation of the communication resources provided by INFINET, Banks will have to take steps to create their own individual networks (Virtual Private Networks).
- ◆ It is desirable that each VSAT location is manned by a technically qualified person so as to ensure that the VSAT is always up and in case of any breakdown appropriate contact is established with IDRBT, Hyderabad for trouble shooting. The system administrator in-charge of LAN and other devices can be given this responsibility.
- ◆ Banks will have to ensure that persons identified/trained in operational aspects of VSAT are to be retained for this purpose and their services should be utilised at least for three years.
- ◆ As soon as the VSATs are commissioned, the banks concerned may make payment, after deducting the cost towards TANJI box which cannot be installed now due to some unavoidable reasons.
- ◆ The usage charges for INFINET will be decided shortly and charging will be started after the network stabilises.



The distinguished guests returning from the VSAT Control Centre (VCC), after its inauguration.

Present Status of INFINET

Around 450 VSATs are to be installed at remote sites as part of the countrywide Network. As of

now (31st August, 1999) 225 VSATs have been commissioned at various remote locations. Work is in full swing to commission the VSATs at all other locations. The installation and commissioning of the VSATs at all the remote sites are expected to be completed by 31st October 1999. Applications are being designed for inter-bank transactions by RBI, IDRBT, Payments System Advisory Committee (PSAC) and IBA. Message formats for Inter-bank transactions have been finalized. Individual banks can now plan for deriving the maximum advantage through devising applications of their own by creating a Virtual Private Network (VPN) on the INFINET for them.

Guidelines for using the INFINET

An updated version of the Guidelines has been sent to all Member Banks and Remote Sites. All VSAT locations should have the Subnet Mask as 255.255.255.224(including the IDUs).

For help on problems related to the functioning of INFINET VSATs please contact :

VSAT Control Centre (VCC)

Phones : 040-3536367,368,369,370(4 lines)

Fax : 040-3536370,3535157

Fax (X Pad) :39992111003

e-mail : cvadlamudi@hss.hns.com or infinet@idrbt.ernet.in

IDRBT

Shri. Aditya Gaiha, Manager,

Phone : 040-3536291,3534981,982,983 (4 lines)

Fax : 040-3535157

e-mail : aditya@idrbt.ernet.in

The domain name for the CUG (Closed User Group) is INFINET.IN. Banks may use the SWIFT bank ID to represent the bank in the domain. All the members of the CUG are requested to strictly abide by the guidelines to avoid problems in networking and connectivity.

**INFINET Hub Equipment at IDRBT
has been successfully tested for Y2K Compliance.**

Messaging Backbone

IDRBT has evaluated the various options available for choosing an appropriate Messaging Backbone for the INFINET. It has been decided to have an MS Exchange based solution implemented on the INFINET by M/s HECL. Certification and Encryption will be part of this messaging backbone. Plans are afoot to implement the messaging backbone at the earliest. Banks are free to use any other e-mail backbones by putting in place appropriate connectors to communicate with the Exchange Servers.

Training Programmes on VSAT and Communication

LEVEL 1

The number of Training Programmes for VSAT Users (Level 1) goes up to 18, covering around 500 participants drawn from the Banking Sector. These programmes are aimed at providing the necessary inputs to the officers of banks for operating and managing the remote VSAT sites and guidelines for basic troubleshooting. The programme content and design have been suitably modified to cater to the needs of a heterogeneous group of participants.

LEVEL 2

The VSAT Training Program at Level 2 is meant for middle level executives of CPPDs to help them in formulating policies for managing and administering the VSAT network. They should have attended the Level 1 program. The programme covers:

- TDMA Hub and NMS operation.
- DAMA Network Control Centre and NMS operation.
- The detailed functioning of the communication backbone and details of traffic analysis etc., for a better understanding for policy decisions, pricing and availability of the network in terms of bandwidth allotment and design, setting up of and planning for applications on the network.

One **Level 2** programme was held in the Institute from 07/06/99 to 18/06/99. There were 18 participants in this programme.

Research and Development

Multimedia

The Institute is developing a **Computer Based Training Module on VSATs**. The CBT aims to develop an understanding and appreciation of the concepts and technology of VSATs, with the use of text, graphics and animation. This CBT will work on internet, intranets and on standalones. This CBT will also have self-evaluation tools like quizzes, multiple choice questions etc.

IDRBT is currently involved in the process of identifying multimedia applications in Banking and Finance. A workshop is being planned to be held on Development and Design of Multimedia Products for Banks. A Working Paper has been brought out by the Institute on Technology Based Distance Learning.

Payments System and Security

IDRBT has started a project for development of **Technologies for E-Commerce** and their field implementation. This project aims to develop an E-check payment software, Certificate Server and an Intrusion Detection System (IDS) for such payment system. This project is in collaboration with CMC Ltd., and is sponsored by the Department of Electronics, Govt. of India, New Delhi.

Another project in this area is the **SMart Rupee System (SMARS)**. This project is in collaboration with IIT, Mumbai. This pilot project aims to explore the possibility of having a multifunctional smart card, by creating a national standard for the financial sector in our country as a whole. The operational issues will be studied by implementing this project on a pilot basis in IIT, Mumbai. The Reserve Bank of India, SBI, Canara Bank, vendors of Smart Card and I.T. Vendors are partners in this project.

Certification Management is the focus of another project aimed at evolving a system and standards for Certification Authority to manage the various activities and issues involved in Certification Management for providing security in electronic transactions and e-commerce for the Financial Sector.

Data Warehousing and Data Mining

Data Mining for Analysing Credit Card Transactions:

The primary objective of this project is to design and develop an appropriate Data Mining tool to analyse the Credit Card transactions. The project proposes to facilitate, among other things:

- ❑ Decision support for top level management
- ❑ Planning new strategies for card holders
- ❑ Assessment of risk and credit-worthiness of the card holders
- ❑ Discovery of patterns of card usage in different profiles and segments

Financial Network Architecture and Applications

Indian Financial industry is using diverse networking technologies. Currently 27 Public Sector Banks have jointly established a VSAT network. Using this network banks can put through their intra/inter bank transactions. While integrating these banks into the INFINET, a better communication link (a virtual private network) within the banks can be provided. The Project proposes to evolve standards for Wide Area Network Architecture for the Financial Sector.

The design involves quantifying the measures a business has established for effective operations. In the initial phase the priorities should be given to: maintaining high performance levels with fast network response time, designing highly available networks with disaster recovery mechanisms built into the network, having highly reliable networks. A detailed study will be made to extract the information flow across the network such as volume, traffic load, message type etc. It will also throw more light on the characteristics of the components in the network such as modems, multiplexers, concentrators, LANs, bridges, routers, gateways, protocol converters etc.

Inventory and Analysis of Banking Software Products

With the changing scenario both in Banking Technology and Financial Sector Reforms, there is an emerging need to procure appropriate

software to meet the specific requirements of organizations in the financial sector. Various software firms, individuals and corporates have been involved in the development, upgradation and marketing of different types of software with varying capabilities which would address most of the solutions required by the financial organizations. The project **Inventory and Analysis of Banking Software Products** envisages assessing and analyzing the different products in terms of their suitability in meeting the requirements of the industry. Eventually, a database of all the software products available would be provided on our web site for the benefit of all users. This web site is intended to serve as a platform for both users of the software (Banks and Financial Institutions) and vendors to interact with each other. Using the email link provided in the web site the users can indicate their requirements and the vendors can furnish the modified or updated data on their products to be considered for inclusion in our web pages. Inputs or queries in this regard can also be sent directly to Shri.V.Visweswar, Faculty ([e-mail:viswar@idrbt.ernet.in](mailto:viswar@idrbt.ernet.in)).

The High Level Committees

IDRBT has been actively associated with various high level committees set up by RBI and the Government of India on issues relating to Payment Systems, Security Technology etc., Notable among them are :

- ❖ Committee on Technology Upgradation in Banking Sector
- ❖ Real Time Gross Settlement - Working Group
- ❖ Bureau of Indian Standards Sectoral Committee on Banking and Financial Services (MSD-7)
- ❖ Standing Working Group on Ministry of Commerce on Trusted Third Party Certification Authority.
- ❖ RBI's Central Database Management System - Policy Group.

Ph.D Programme

As planned earlier, the Institute has completed the process of selection of Research Fellows for taking up Research in Banking Technology. Two persons have been selected for this year, 1999-2000 and they have joined the Institute. They will be guided by the Faculty of IDRBT in their research in Banking Technology.

Research Laboratories

The Institute has established a **Multimedia Laboratory** with state-of-the-art equipment. This lab will be used for developing multimedia tools and distance learning modules for Banking and Finance.

Another laboratory, which is being setup, is the **Centre for Security Technology (CST)**, which proposes to cater to the needs of Payments System Security in the country. The CST also plans to provide consultancy and solutions on par with those available in the developed countries.

This Centre will be focussing on Certificate Management, Authentication Technologies, Intrusion Detection System and Study of Frauds, Study on classes of attacks and Active Audit Guidelines for Security.

EXECUTIVE DEVELOPMENT PROGRAMMES

Apart from VSATs and Communication, the Institute is offering a variety of programmes for



Shri..M.Narasimham (second from right) delivering the inaugural address. Dr. V.P. Gulati, Director, IDRBT, and the programme Co-ordinators, Dr. K.C. Mishra, Shri. V.Visveswar and Ms. Mubeen Rafat are also seen in the picture.

the year 1999-2000. The Schedule of Programmes being offered has been sent to all the Banks and Financial Institutions for their comments and feedback.

Programme on Techno - driven Post-Reforms Banking Operations

The first programme on Techno-driven Post Reforms Banking Operations was conducted in collaboration with Administrative Staff College of India (ASCI), Hyderabad. The programme was inaugurated by Shri.M. Narasimham, Chairman, Court of Governors, ASCI. The programme was attended by Zonal Managers, Deputy General Managers and other top executives from various public sector banks, NABARD and RBI. The programme took the participants through a broad scenario of technology based decision-making, analysis and forecasting for effective management of banks. The areas of focus included Asset Liability Management, Credit Risk Management, Forex Risk Management, Planning and Control Functions and NPA Management with hands on exposure to technology based decision making models and simulation exercises in our computer lab.

Forthcoming Programmes

Data Mining in the Banking Industry (October 4-9, 1999)

This Programme aims at strengthening the Planning Exercise in Banks by applying data mining tools to understand customer behaviour. The programme covers data mining techniques, key issues involved, target marketing and knowledge management.

For further details or enquiries on this programme please contact: Dr.Radha Krishna, Faculty ([e-mail: krishna@idrbt.ernet.in](mailto:krishna@idrbt.ernet.in))

Payment Systems and Secure Technology (October 25 - November 3, 1999)

This Programme seeks to create an awareness of the issues involved in e-commerce. The coverage would include: Evolution of a modern payments system and its components in India, Legal framework and the rights and liabilities of the parties involved, and the emerging trends in Electronic Payments.

For further details or enquiries on this programme please contact: Dr.Ashutosh Saxena, Faculty (e-mail: ashu@idrbt.ernet.in)

Programmes Planned

The list of programmes planned is given here:

MULTIMEDIA

- Distance Learning with Web and Multimedia
- Multimedia Application in Banking & Financial Sector
- Workshop on Development and Design of Multimedia products for BANKS

SECURITY

- Smart Cards for Smart Bankers
- Payment Systems and Secure Technology
- EDI Security Control & Audit

PAYMENT SYSTEMS

- Banking Technology for Central Bankers
- Workshop on RTGS

BANK MANAGEMENT AND TECHNOLOGY

- Techno-Driven Post Reform Banking Operations
- Techno-Driven Asset Liability Management
- NPA Management

FINANCIAL NETWORKS

- Data Communication & Network Management System
- High Speed Networking-Emerging Trends
- INFINET and Intranet Architecture for Banks
- Financial Network Architecture and Application

DATA MINING

- Programme on Data Mining in Banking Industry
- DCOM application in Banking and Financial Institutions

ADVANCED TOPICS IN BANKING TECHNOLOGY

- ERP in the Financial Sector
- NeuroFuzzy Expert Systems for Banks & Financial Institutions
- IT for Risk and ALM



An aerial view of the Executive Facility Centre at IDRBT with the Academic Block in the foreground.

The Institute also proposes to conduct customised, tailor-made and sponsored Executive Development Programs on these topics for individual banks, depending upon their requirements, to suit their specific needs.

For further details on our regular programmes and sponsored programmes please contact Shri.D.N. Venkatesh, Administrative Officer (e mail: program@idrbt.ernet.in).

IDRBT on the Internet

Web Based Training

To provide easy and wider access to knowledge and information needed across the Banking Industry on matters relating to Information Technology, IDRBT is planning to have an extensive Web Based Training. This medium of instruction will have the obvious advantages and economies in terms of cost, time and other outlay on resources required. This WBT will have a tremendous multiplier effect since a large number of people can directly gain useful knowledge and in turn either use or pass on such knowledge to others in the field.

This WBT will be available on our Website to be hosted with the address: <http://www.idrbt.ac.in> which will be devoted mainly for advancement of Banking Technology in India.

The other website of ours, i.e., <http://www.idrbt.com>, is to provide access to people across the world to know about the activities of our Institute and to communicate with us for specific purposes.

The Personnel Desk

Faculty

Four more persons have joined the Faculty at IDRBT. They are: Dr. P. Radha Krishna, Shri. A.R. Dani, Shri. Supriya Kumar De and Shri. M.V. Sivakumaran.

Dr. P. Radha Krishna holds a Ph.D degree from Osmania University, Hyderabad. Prior to joining IDRBT, he was a Scientist "SC" with the National Informatics Centre(NIC) where he was involved in the design and implementation of several database packages and coordination of state level computerization of election related activities. He has also conducted various "Technology Update" programmes for Government Officials as well as for NIC staff. He has published two books and a number of research papers in national and international journals.

He is currently involved in Data Warehousing and Data Mining research projects at the Institute.

Shri.Ajay Ramachandra Dani, AGM, Reserve Bank of India, has a long and fruitful association with Information Technology. He has worked in the Departments of Statistical Analysis and Computer Services and Information Technology. He has been involved in the Computerisation of 10% Relief Bonds, Dealing Room and Forex Transactions and Accounting - both Front Office and Back Office. He has also been involved in various statistical surveys and Risk Minimisation Models.

He is currently involved in the research project on Technologies for E-Commerce and issues related to INFINET.

Shri. Supriya Kumar De specialises in the area of Fuzzy Database and Artificial Intelligence. He has submitted his Ph.D thesis in this subject to Indian Institute of Technology, Kharagpur.

He is currently working in the area of Security Technologies and Risk Management in Banking.

Shri. M.V. Sivakumaran has joined us as a Faculty on Deputation from Corporation Bank, Head Office, Mangalore. He brings with him over 20 years of experience as a commercial banker. He has been a Faculty in his bank for nearly five years and has been associated with software development for Total Branch Automation, Training in Technology and Computer Orientation.

He is currently involved in Computer Based Training, Website Design and Multimedia projects.

Administration

Shri. A.D. Hariharan, General Manager, RBI, who was in charge of Administration at IDRBT has retired from his services, on superannuation, on 30th April 1999. He has been a source of strength for the Institute in its initial days, when a lot of work relating to infrastructure creation was handled. The Institute wishes to place on record its sincere appreciation for his memorable contribution during his tenure in the Institute. IDRBT wishes him and his family a long life of happiness, good health and prosperity.

*Note : This is the new format of the **IDRBT Newsletter** which we have been publishing so far. The last issue was published in January 1999 (Vol : 2, No: 2). We have chosen the name **FAST FORWARD** to reflect the primary aim of the Institute : to take Banking Technology in India Forward.*

Institute for Development and Research in Banking Technology

(Established by Reserve Bank of India)

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