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INSTITUTE FOR DEVELOPMENT AND RESEARCH IN BANKING TECHNOLOGY

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# **INFINET logs on to MPLS Technology**

With a view to enable the Indian Banking and Financial Sector to reap the benefits of the developments in the field of networking technologies, the Institute is migrating the VSAT and Leased Line based INdian FInancial NETwork (INFINET) to Multi-Protocol Label Switching (MPLS).

The MPLS provides for Virtual Private Networks (VPNs) to communicate in a secure manner over a private network. This improves efficiency and reduces the cost while ensuring adequate safety and security. The network architecture is designed to have Link Level, Path Level, Device Level and Service Provider Level Redundancy through Network-Network-Interface.

Further, in order to implement the project expeditiously, it has been categorized into two phases:

**Phase I:** In this phase, the backbone network of the INFINET consisting of RBI locations and IDRBT are being migrated to MPLS. Accordingly, twelve locations have already been migrated to the MPLS technology.

**Phase II:** In this phase, the access network consisting of leased line connectivity between commercial banks and the nearest INFINET backbone location would be migrated.

# ≪ Meeting of CUG Members

The Institute conducted a meeting for all CUG member banks on July 04, 2008 to explain in detail the modalities required for connecting to the INFINET MPLS Network. The Institute has also collected preliminary information from banks for feasibility study. Banks are now in the process of placing purchase orders for implementing MPLS.

# **≪** MPLS Training

The Institute conducted a workshop for officers of Reserve Bank of India to explain the requirements at RBI and also roles and responsibilities of service providers and local officials during the migration process. The Institute is also planning to conduct one-day workshops for officials of the member banks, to explain the migration process and the related issues, including the roles and responsibilities of all concerned. The first workshop in this series was conducted on August 20, 2008, wherein the banks, which could not depute the representatives to the meeting held on July 04, 2008, were covered.

# Indian Financial Computer Emergency Response Team

The Department of Information Technology, Ministry of Communications and Information Technology, Government of India, has established the Indian Computer Emergency Response Team (Cert-In), to serve as the Nodal Agency for the Security and Protection of the Critical Infrastructure of the Nation.

As part of the CERT-In, each sector needs to set up a Sub-Cert and IDRBT is the Sub-Cert for the Indian Banking and Financial Sector. Accordingly, the Institute has established the Indian Financial Computer Emergency Response Team (INFICERT), the Sub-Cert for the Indian Banking and Financial Sector.

The activities of the INFICERT include:

- Identification of Critical Assets
- Monitoring threats continuously
- Receiving incidents and responding to them appropriately
- Conducting awareness programmes
- Exchanging information with banks, FIs and domain experts

Further, with a view to make the BFSI Sector aware of security issues, a website is being made operational. The website will allow authorised users of banks to submit their information and possible threat perspectives. The website is expected to emerge as the focal point for reporting incidents pertaining to banks and maintains the database of incidents.

The INFICERT administrator at the Institute would collate and make information available in presentable format to bankers for their informed decision-making. As a next step, it is planned to incorporate analysis of the trends and patterns of the intruder activity and help develop preventive strategies for banks and financial institutions. The website will offer information about new threats, viruses, worms, etc., which are liable to affect banks.

Information about programmes, seminars and workshops in the related areas being conducted by the Institute, other organisations, related white papers, working papers, reports, etc., is also being made available.





# **Certifying Authority Services**

The IDRBT Certifying Authority (CA) has issued over 1,02,000 Digital Certificates.

Banks and Financial Institutions are using certificates issued by the IDRBT CA for Real Time Gross Settlement, Centralised Funds Management System, Corporate email, Structured Financial Messaging System, Cheque Truncation System, Internet Banking Web Server, OLTAS and settlement applications of Clearing Corporation of India Limited.

Further, 133 Registration Authority Offices have been created covering 33 public sector banks, 31 private sector banks and 5 financial institutions. These also include 16 Registration Authority Offices created for State Bank of India.

Forty-five RA Offices for all Regional Offices and Central Office Departments of Reserve Bank of India are also in operation. IDRBT is also acting as Registration Authority Office for banks and financial institutions that do not have an RA set up.

The Controller of Certifying Authorities, Government of India, has renewed the IDRBT Certifying Authority's license for a further period of five years.

## National Financial Switch

The Institute's National Financial Switch continues to facilitate inter-connectivity between the Banks' switches, thereby enabling the customers of member banks to use all ATMs of the network. The NFS Network presently connects 30,813 ATMs of 32 banks, which is the largest number of ATMs under a single network in the country. The Institute used to charge Rs. 2/- for switching (routing) the transactions of various member banks. With a view to encourage all banks to join the NFS network, widen the coverage of ATMs, provide easier access to customers and to promote greater use of ATMs as an important payment system infrastructure, IDRBT waived off the switching fee of Rs. 2/- with effect from December 03, 2007.

This proactive measure is expected to promote use of ATM as shared infrastructure of all banks, benefiting all customers and thereby contributing to a techno-banking culture all over the country. This also opens up an opportunity for banks to reduce costs by routing interbank ATM transactions through NFS.

The Institute has set up an NFS User Group to deliberate various issues related with the procedures, fee, etc. The seventh meeting of the group was held on February 12, 2008.

Further, a Steering Committee consisting of the banks' top management resolves various issues related to the National Financial Switch and policies from time to time.

# Structured Financial Messaging System

The SFMS with its unique features is gaining momentum and banks are increasingly using it for National Electronic Funds Transfer, Real Time Gross Settlement and other internal applications.

### **♦ IFSC Directory**

The IFSC Directory has been hosted by IDRBT as a part of the technology infrastructure initiative being created for the banking and financial sector. 107 banks have furnished their details and 55779 branches have been listed.

## ◆ NEFT implementation through SFMS

Participation of banks in NEFT has also tremendously increased. In order to assist the banks in joining SFMS/NEFT, a task force has been formed with representation from RBI, IDRBT, Public Sector, Private Sector, Cooperative Sector and Foreign Banks.

#### ♦ Trade Finance Messages under SFMS

Under the initiative of the IBA, more and more banks are participating in Category 7 Series messages pertaining to Letters of Credit.

#### Common Gateway for Small Banks

The infrastructure for providing a cost effective solution to the small and mid-sized banks enabling them to participate in SFMS and NEFT has also been operationalised.

#### ♦ India SFMS Forum

To popularize and to create an interactive forum, IDRBT has formed an India SFMS Forum of banks. This forum consists of three groups - Technological, Business and Message groups.



# Ph. D. Programme

The Institute offers a Ph.D (Research Fellow) programme in collaboration with the University of Hyderabad in various areas of Computer Science, Information Technology and Management.

The Research Fellows work on research projects related to Banking Technology, specifically in the focal areas of Networking Technologies, Information Security, Business Intelligence, Risk Management, and Payment Systems, etc.

Currently, Research Fellows are carrying out research towards their Ph.D in the following areas:

 Access Control Modeling for Grid Computing Systems

- Authentication Protocols for Wireless Networks
- Class Prediction from Highly Overlapped and Imbalanced Data Sets
- Rule Extraction from Neural Networks
- Rule Extraction from Classifiers Based on Optimization Techniques
- Development of Security Protocols for Payment Services on Mobile Adhoc Networks
- Computational Intelligence Based Risk Management

The Doctoral Review Committee for reviewing each Research Fellow's progress has been constituted and the research work of all the Research Fellows have been evaluated. The progress of the Research Fellows is satisfactory.

# **Executive Development Programmes**

The Institute's Executive Development Programmes form an integral part of the Institute's Initiatives in aiding technology absorption in the Banking and Financial Sector. The objectives of these programmes are:

- To improve the efficiency of IT operations in banks
- To focus on Emerging Technology areas such as Mobile **Banking**
- To facilitate compliance with International best practices
- To help banks synchronize IT objectives with business objectives

Since October 2007, the Institute has conducted over 30 Executive Development Programmes, training over 600 participants in the following areas:

- Financial Risks and Asset Liability Management
- Core Banking Solution Audit

- Information System Security & Incident Response
- Leveraging Web 2.0
- Information System Audit
- XBRL-Based Data Reporting
- Information Security Management
- Auditing in IT Environment
- ISO 27001
- Mobile Banking
- Technologies for Financial Inclusion
- **Technology Tools for Trainers**
- Data Warehousing, Data Mining & CRM
- Structured Financial Messaging System

The Institute also conducted two International Programmes on Auditing in IT Environment, and Training Methods and Skills for Managers from Africa, in March and April 2008.



A view of the participants of the Programme on Technologies for Financial Inclusion, held from September 22-23, 2008



# **Dignitary Visits**

## Governor, Saudi Arabian Monetary Agency

Shri. Hamad Al-Sayari, Governor, Saudi Arabian Monetary Agency, visited the Institute on February 06, 2008.

Dr. N. Krishna Mohan, Director, and Shri K. Chandrachoodan, Chief General Manager, welcomed him. He then met the Faculty, Service Unit Heads, and Staff members of the Institute to gain an understanding of the activities and priorities of the Institute.

Dr. N.P. Dhavale, Deputy General Manager, made a presentation on the various initiatives of the Institute and its pivotal role in the context of driving technology absorption in the Indian Banking and Financial Sector.

The Hon'ble Governor then enquired if the Institute is working on areas such as Biometric Banking for the handicapped and blind and if there are solutions to make transactions on ATMs glitch-free.



Dr. N. Krishna Mohan, Director, IDRBT explains the pivotal role of the Institute to Shri Hamad Al-Sayari, Governor, Saudi Arabian Monetary Agency

He pointed out that many a time ATMs either shelled out more money or paid out less. "ATMs should be more perfect and there is a need to capture clean images of ATM users to prevent financial frauds", he said. He then visited the various facilities and complimented the Institute for its various initiatives.

## DGs and EDs of Central Banks of SAARC Countries

The Dy. Governors and Executive Directors of Central Banks of SAARC Countries visited IDRBT on June 30, 2008.

The objective of the delegation was to gain an understanding of the role played by the IDRBT in providing communication network for the financial

system as also the various payment gateway services being provided for facilitating the various payment and settlement systems in the country.

Dr. N. Krishna Mohan, Director, IDRBT, welcomed the delegation and presented a brief about the various initiatives of the Institute.

Shri K. Chandrachoodan, Chief General Manager, Dr. N.P. Dhavale, Deputy General Manager, & Shri R. Mani, Deputy General Manager, then made a presentation on the technology initiatives of the Institute, its pivotal role in the financial system of the country and the contribution of the Institute in spearheading technology absorption in the Indian Banking and Financial Sector.

The delegates were particularly interested in the areas of Mobile Banking and ATM Banking and looked forward to associate with the Institute to make the payment and settlement systems in the SAARC countries more robust and people-friendly.

### **♦ DMD and ED of Monetary Authority of Singapore**

Ms. Teo Swee Lian, Deputy Managing Director and Mr. Ngiap Boon Lee, Executive Director of Monetary Authority of Singapore, visited the Institute on August 26, 2008 with a view to gain a first-hand understanding of the various technological advancements in the Indian Banking and Financial Sector.

Dr. N. Krishna Mohan, Director, IDRBT, welcomed the dignitaries and provided a brief introduction of the Institute

Dr. N. P. Dhavale, Deputy General Manager, made a presentation encapsulating the various functions of the Institute stressing on the pivotal role of the Institute in ushering in technology and taking it forward in the Indian Banking and Financial Sector. He traced the beginnings of banking technology and how it had evolved and progressed to become more robust and cheaper for the common man.

The dignitaries appreciated the work done by the Institute and noted that many of the initiatives of the Institute can serve as a model for Singapore. The dignitaries also visited the technological facilities to check out how it all happens directly.

## SPEARHEADING TECHNOLOGY ABSORPTION IN BANKING