Information Technology News

I.   Committee on Technology Upgradation in the Banking Sector:

In order to examine the various issues pertaining to technology upgradation in the banking and financial sectors and to suggest steps for a time-bound implementation schedule of the Narasimhan Committee (II) recommendations, to be followed by banks and financial institutions, the Reserve Bank of India set up the Committee on Technology Upgradation in the Banking Sector, in September 1998. The Committee headed by Dr. A. Vasudevan, Executive Director, Reserve Bank of India, had representation from the Government, banks, academic institutions associated with information technology and Reserve Bank of India.

The terms of reference of the Committee were to:

(a)   Suggest necessary legislative changes for implementation of electronic funds transfer with, *inter alia*, emphasis on:

- Encryption of Public Switching Telephone Network (PSTN) lines;
- Admission of electronic files as evidence;
- Treating Electronic funds transfers on par with crossed cheques / drafts for purposes of Income Tax etc.;
- Record keeping;

(b)   Recommend approaches for development of intra-bank/intra-city communication network to facilitate connectivity with VSATs;

(c)   Suggest ways to bring about computerisation of Government accounts in an expeditious and efficient manner;

(d)   Work out modalities necessary for development and optimal utilisation of a secure, robust Wide Area Network (WAN) based on satellite with the necessary security systems, by banks and other financial institutions, to ultimately develop a sound and an efficient payments system;

(e)   Examine methods by which technological upgradation in banks and financial institutions could be effected and in the context study the feasibility of establishment of standards, designing payments system backbone and standards relating to security levels, messages and smart cards by IDRBT;

(f)   Make recommendations for development of data warehousing and data mining, with a view to creating opportunities for development of efficient management information system (MIS) in near future;

(g)   Recommend guidelines for outsourcing of programme development and implementation work; and

(h)   Make recommendations on any other related issues.

The Committee submitted its report on May 7, 1999. A summary of the Committee's recommendations is given below:

1.   Communication infrastructure and usage of INFINET

1.0. The INFINET should be a blend of satellite, microwave and terrestrial links, appropriately configured depending upon availability, accessibility and likely volume of message traffic. The use of VSATs will be particularly effective in places, which are inaccessible, and in difficult terrain. The transponder capacity needs to be enhanced to the extent feasible alongwith the number of outroutes as the demand grows. INFINET may be expanded by using a blend of satellite and land links as media for payment and settlement systems backbone with the growth in network traffic.

2.   Standardisation and Security

2.0. There should be an appropriate institutional arrangement for key management and authentication by way of a certification agency. RBI may consider appointing IDRBT as the certification agency for security management.

2.1. The technology should be allowed to evolve into standard-based solutions for multi-vendor heterogeneous environment working cooperatively and collectively for EFTPOS, including the debit, credit and Smart cards based operations. Card layout with Europay, Master card, VISA (EMV) specifications appears most suitable.

2.2. The RBI and banks should have a Standing Committee with members having requisite expertise to periodically review standards/security policies/message formats/system software and their implementation.

3.   Outsourcing of technology and services

3.0. Outsourcing software technology would be a better option for banks to resort to in the context of rapid changes taking place in the IT industry.

3.1. Software outsourced could be customised - either in-house or through outside vendors. It is essential that software that has been outsourced is maintained regularly - either by outsourcing maintenance or by in-house maintenance.

3.2. Specific terms and conditions governing the outsourcing activity have to be clearly spelt. Factors such as security, safety for day-to-day operations, integrity of data, liability for third party software, confidentiality obligations, rights of bank personnel to access vendor sites, penalty clauses for delays etc. should be integral part of agreement with vendors. There is a need for obtaining full sets of documentation -both user and system. The entire source code should be obtained, if need be under an ESCROW arrangement.

4.   Computerisation of Government Transactions

4.0. There is need to computerise all branches of banks dealing with Government transactions. In the first phase computerisation of all focal point branches and State Government Link Cells should be completed by March 31, 2000 to be followed by the second phase of computerisation of all branches dealing with Government transactions on an expeditious basis.

4.1. The computerisation of Government departments should be synchronised with the computerisation of bank branches dealing with Government transactions.

4.2. The Public Accounts Departments of the RBI should be connected to Central Accounts Section (CAS), RBI, Nagpur to enable same day reporting and booking of Government transactions. Establishment of connectivity between the CAS, Nagpur and the Reserve Bank's departments (DGBA, IDMC) and the Controller General of Accounts and the Finance departments of State Governments is necessary. The RBI should develop the necessary software package for information exchange using the INFINET.

4.3. There is a need to delink the submission of scrolls from the funds settlement by the payee branch. The computerisation of Government accounts would require a process re-engineering to upgrade the entire process of Government accounting/funding.

5.   Data Warehousing, Data Mining and Management Information System

5.0. A robust MIS founded on data warehousing and data mining, at individual bank level is essential for implementing various regulatory guidelines including the latest one on ALM. The structure, configuration and design of the data warehouse may vary from bank to bank.

5.1. All banks should put in place their data warehouse strategy by January 1, 2001. A Task Force may be set up by IBA to explore feasible methodology for working out a unique identification system for individual customer data bases at banks.

5.2. The Reserve Bank of India could establish a Data Warehouse on Banking and Finance for the data collected under the regulatory provisions. Data collected by the Department of Banking Supervision, the Department of Banking Operations and Development, the Exchange Control Department, the Department of Economic Analysis and Policy and the Department of Statistical Analysis and Computer Services of the RBI can be used for data warehousing and data mining.

6.   Legal framework for Electronic Banking

6.0. The Reserve Bank may promote amendment to the Reserve Bank of India Act, 1934 and assume the regulatory and supervisory powers on payment and settlement systems. Simultaneously, the RBI may promote a new legislation on Electronic Funds Transfer System to facilitate multiple payment systems to be set up for banks and financial

institutions.

6.1. A Standing Committee to examine legal issues on Electronic Banking with members drawn from the Legal Departments of the RBI, IBA and a few banks may be set up by the Reserve Bank.

6.2. Issues on confidentiality of data in the computerised environment and in the context of banker's secrecy obligations require a detailed scrutiny which may be examined by the proposed Standing Committee on legal issues on Electronic Banking.

7.   Other Related Issues

7.1. Re-engineering

Banks may choose the branches and areas of operation where they have already introduced a certain degree of automation and computerisation and review the systems and procedures in these branches/areas to adapt them to the technology that is newly introduced. These banks should now attempt to have a *hi-tech bank within the bank*, totally distinct and different from the other branches and areas of operation which now perform the routine business without that much of intensity of computerisation. The stress should be laid on review of the processes, based on the technology introduced or likely to be introduced in selected areas, dovetailing with the processes at the other branches and, if necessary, there can be a separate manual or work procedure for this purpose, without disturbing the existing situation.

7.2. Human Resource Development

7.2.1. Education of staff on IT should be given due importance. Adequate budgetary allocation for the purpose needs to be given. The training establishments of the banks should be strengthened with adequate personnel and other infrastructure facilities, to impart necessary IT training to all levels of staff. There is a need for an institution specialising in affording training to bank staff exclusively in banking related IT.

7.2.2. The larger banks should explore the possibilities of giving exposure to their technical staff on the latest developments that are taking place around the world in the area of IT and allied areas by deputing their technical officers to the banks and other specialised institutions abroad and also to the Seminars, Workshops, etc. relating to IT.

7.3. Sharing of Experiences on technology implementation

7.3.1. The meetings of Computer Policy and Planning Department (CPPD) Chiefs should be held frequently enough to be effective. The IBA Standing Committee on technology issues may also meet more frequently to ensure the successful implementation of industry level technology projects like ECS, EFT, SPNS and Smart Card.

7.3.2. One of the goals should be to make India a good market place for banking software. Such a move would help in driving down the cost of banking technology over a period of time.

## II.   Shared Payment Network System -SWADHAN

1.0. Indian Banks Association (IBA) has set up a Shared Payment Network System (SPNS) network of ATMs of its member banks in Mumbai called SWADHAN. The network went live on February 1, 1997. The objective behind the SWADHAN network is to provide 24 hours, 7 days in a week and 365 days in a year, electronic banking service to the customer of a member bank any where in the city of Mumbai.

1.1. The member banks, which participate in the network, issue cards to their customers for transacting on SWADHAN network. The customer is free to conduct his/her transactions at the ATMs of any of the member banks in Mumbai. The services offered under SPNS are cash withdrawal, balance enquiry, cash/cheque deposit, transfer of funds, request for cheque book, standing instructions and statement of account, and change of Personal Identification Number (PIN).

1.2. The ATMs of member banks are connected to a Central Switch through MTNL leased lines. The cardholders database is kept at the Central Switch. Banks update the balances at the Switch at pre-determined frequencies. On a daily basis the Switch provides settlement reports necessary for arriving at inter-bank settlement. Bank of India acts as the settlement bank for all inter-bank transactions in SWADHAN. Every member bank has to maintain a deposit of Rs. 25,000/- with the settlement bank.

1.3. In 1997-98 (April-March) 73 ATMs were part of the network. The number of ATMs has now grown to 100 in 1998-99. The cardholders base has also grown correspondingly from 14,856 in 1997-98 to 34,619 in 1998-99 (Figure 1.1). A similar trend has been witnessed in the volume and value of transactions spread over the two years (Figure 1.2). While the volume of transactions have grown up by 128% from 1,14,334 in 1997-98 to 2,61,165 in 1998-99, the value has gone up by 130% from Rs. 13 crores to Rs. 30 crores during the same period.

Figure 1.1. Growth in the No. of Cardholders
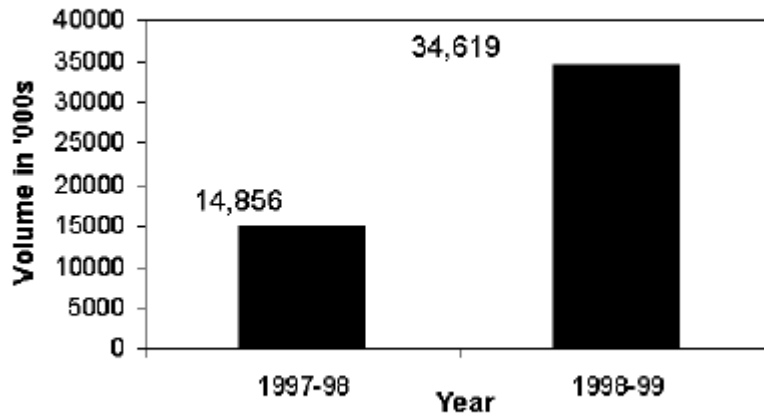
Figure 1.2. Growth in the Volume and Value of ATM Transactions