

## 3.2 Review on Computerisation in the Income Tax Department

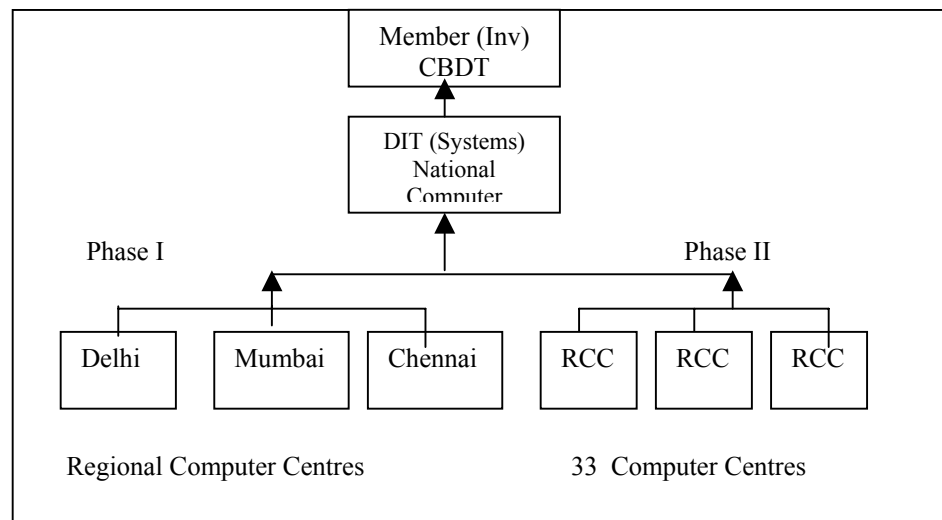
### Introduction

**3.2.1** With a view to improve the efficiency and effectiveness of Direct Taxes administration and to create a database on its various aspects, a Comprehensive Computerisation programme was approved by the Government in October 1993. In accordance with the programme computerisation was taken up on a three-tier system. At the apex level, a National Computer Centre (NCC) having large computers to maintain databases and to execute processing work of a global nature was envisaged. At the second level, 36 Regional Computer Centres (RCCs) were to be established across the country equipped with large computers to maintain regional databases and to cater to regional processing needs. All the RCCs were to be connected to the NCC through high speed data communication lines. At the third level, computers were to be installed in the rooms of all the assessing officers and connected with the respective RCC for data/information exchange, in a phased manner. Accordingly, in the first phase, Delhi, Mumbai and Chennai City regions were taken up and provided with state-of-the-art hardware and software connected with the RCC through inter-city and intra-city linkages. After stabilising of the computer systems in the 3 RCCs, computerisation of 33 other centres covering the rest of the country was taken up in the second phase.

### Organisational setup

**3.2.2** The Directorate of Income Tax (Systems) {DIT(S)}, New Delhi, was made the main nodal authority for overall planning and implementation of the computerisation programme including procurement of hardware/ software and development/ installation of application software. In addition, at each Regional Computer Centre the Chief Commissioner of Income Tax (CCIT) was required to monitor and co-ordinate with the DIT(S). He would be assisted by the CIT (Computer Operations) who would monitor the functioning of the RCC.

The organisational set-up is diagrammatically represented below:



**Objectives of computerisation**

**3.2.3** The main objectives of the computerisation programme as approved by the Committee on Non-Plan Expenditure (CNE) were:

- (a) to improve the efficiency and effectiveness of tax administration;
- (b) to ensure timely availability and utilisation of information;
- (c) to reduce compliance burden on honest tax payers;
- (d) to enhance the equitable treatment of tax payers by income tax procedures;
- (e) to ensure better enforcement of tax laws;
- (f) to provide management with reliable and accurate information in time so as to assist them in tax planning and legislation and also in decision making;
- (g) to broaden the tax base ; and
- (h) to keep the cost of administration at an acceptable level over a period of time.

**Budget and Finance**

**3.2.4** The details of budget allocations for computerisation and the expenditure incurred for the period 1994-95 to 1998-99 are given below:

(Rupees in lakh)				
Sl.No.	Year	Budget Estimates	Final Revised Estimates	Expenditure
1	1994-95	400	2855.00	2758.15
2	1995-96	500	694.11	665.26
3	1996-97	500	1000.00	944.69
4	1997-98	500	4020.50	4020.50
5	1998-99	1,500	3894.50	2066.28
Total		3400	12464.11	10454.88

It was seen that the budget estimates were revised in all the years. The percentage increase while revising the estimates ranged from 39 to 704 during the years 1994-95 to 1998-99. Total increase in the budget estimates to the expenditure incurred during the years 1994-95 to 1998-99 was 207 percent. This indicates that the estimates were unrealistic. No justification for these variations was furnished by the department.

**Scope of review**

**3.2.5** The review broadly covers two main aspects -- (i) procurement policy and (ii) the computerisation programme with reference to the objectives and its implementation.

**Audit methodology**

**3.2.6** With a view to examine the technical aspects of the computerisation programme which inter alia include a study of the conceptual plan, hardware, software and network sizing and the organisational aspects of the system, a team of IT professionals from IIT Delhi were engaged by C&AG as consultants in May 1999. Their findings have been incorporated in this report along with the audit findings based on scrutiny of records for the period April 1994 to March 1999 maintained at the Directorate of Income Tax (Systems), Delhi and other selected field offices.

Highlights

**3.2.7 Conceptual Plan**

The conceptual plan finalised for computerisation in the Income Tax Department grossly underestimated database sizing. The plan restricted itself to three major cities of Delhi, Mumbai and Chennai and failed to consider issues of expansion to 33 other centres. The plan also did not visualise the need for centralised PAN database.

[Para 3.2.8]

**Hardware evaluation**

None of the tenders, invited for procurement of hardwares matched the desired specifications and found to be under configured. Though the Systems requirements specification, required to be prepared before procurement of hardwares, was not finalised, the department placed the order in July 1994 on TISL for procurement of hardwares costing Rs. 1990 lakh without retendering.

[Para 3.2.9.1(i)]

An amount of Rs. 208.64 lakh included in the tender by M/s TISL as marketing expenses, overhead and local services was accepted by the department in contravention of Government norms. Other cases of avoidable expenditure of Rs. 41.59 lakh on procurement of hardware items were also noticed.

[Para 3.2.9.1(iii) and (v)]

As essential prerequisites such as installation sites and terminal banks were not in a state of readiness, the installation of the procured hardware was delayed by a period ranging from 3 to 26 months.

[Para 3.2.9.2(ii)]

Query processing was slow with response time for typical queries varying from 5 minutes to 40 minutes against the requirement of 3 to 5 seconds.

[Para 3.2.9.2(iv)]

**Software evaluation**

None of the application softwares developed by M/s. TCS was capable of utilising the data captured through OCR using bar code technology. This resulted in avoidable expenditure of Rs. 82.08 lakh for the data entry work got done by engaging outside vendors.

[Para 3.2.10.1(b)]

Tenders were invited in February 1994 for development and implementation of nine applications systems to be completed within six months. However the contract was awarded to M/s. TCS in October 1994 by allowing 24 months to develop and implement the application systems. Further, all the application systems except TAS and AIS, were installed after a delay ranging from 6 to 14 months beyond the extended period of 24 months resulting in delay in the whole process of implementation of computerisation programme.

[Para 3.2.10.1(f)]

Cases of avoidable expenditure of Rs.83.25 lakh were noticed on procurement of software items.

[Para 3.2.10.1(g)]

Though the response time in terms of query processing was included in the tender, the same was however ignored by M/s. TCS and the department accepted it as a non-critical parameter in assessing the performance of the vendor. The sizing estimates presented in the Software design document were also inadequate. Further, the hardware will be grossly inadequate once the system grows to its full potential. It was noticed that RCCs are already facing shortage of disk storage.

[Para 3.2.10.1(h) and (j)]

There was heavy shortfall in achieving the targets in respect of PAN allotment and migration of data to AIS in three metro cities as well as in the other 33 centres. There was also a delay in disposal of PAN grievances/complaint cases for more than a year. PAN cards were not designed to have security features as verification of particulars was neither prescribed nor got verified and particulars were accepted on the basis of self attestation

[Para 3.2.10.2(b)(i)]

Assessee Information System (AIS) was not properly designed taking into consideration the actual working of the department as a result of which serious bottlenecks occurred during its implementation.

[Para 3.2.10.2(b)(ii)]

Despite implementation of Tax Accounting System (TAS), there had been heavy short fall in processing of challans, inordinate delay in preparation and dispatch of detailed account by the CIT to ZAOs and in the generation of daily collection/refund register.

[Para 3.2.10.2(v)]

IRLA system was not fully operational as the other systems viz. PAN, TAS, AST and TDS were not stabilised. Other systems viz. EIS, MIS and RMS were also not operational for the main reason that the Personal Computers provided to AOs were not networked with the RCC/TBs.

[Para 3.2.10.2(vi) to (ix)]

#### Networking evaluation

Terminal banks could not be commissioned till July 1996 and the leased lines, which were to be operational before the end of March 1995, could be made operational after a delay ranging from 11 months to 32 months.

[Para 3.2.11.2(i)]

Networking of the entire system could not be made functional even after a period of more than two years from the receipt of hardware, resulting in delay in implementation of the entire programme.

[Para 3.2.11.2(ii)]

Though leased lines were frequently down for more than 96 percent of total time during 1996-97 to 1998-99, no proportionate adjustment from rent paid to MTNL was made. Cases of avoidable expenditure of Rs.19.27 lakh were also noticed in procurement of networking items.

[Para 3.2.11.2(iv) and (v)]

The state of networking is not adequate for on-line computing as was envisaged in the original conceptual document as also in SRS. There was no separate specification and design of either inter city or intra-city networks.

[Para 3.2.11.2(vi)]

### Training

M/s TATA IBM was awarded a contract in August 1997 to impart training for 1080 officers at a cost of Rs. 3.60 lakh. Though 890 Personal Computers allotted to these officers were installed in May/August 1997, only 541 officers could be trained till January 1999 due to less nomination of officers

[Para 3.2.12(a)]

Two contracts to impart training to 6620 officials at a cost of Rs.62.45 lakh were concluded with M/s TCS in March 1996 and December 1997 without inviting tenders. The facts, that the rates were based on the contract of 1994 for different training programme of development of application software and not for training of computer familiarisation, was not brought to the notice of the Ministry/Board.

[Para 3.2.12(c)]

### Evaluation of the conceptual plan

**3.2.8** The genesis of the computerisation efforts in the Income Tax Department was based on a feasibility study conducted by M/s CMC Ltd. Subsequently, a working group was appointed whose recommendations gave rise to a conceptual plan for the information systems.

A study of the conceptual plan revealed that the exercise of identifying the processes to be computerized and architecture of the proposed solution is well documented and detailed. The following shortcomings were, however noticed in implementation of the conceptual plan:

- ◆ None of the projected milestones was realised in time. M/s Tata Consultancy Services (TCS) which committed to deliver the fully developed and tested software in 40 weeks took over 104 weeks to deliver all the modules.
- ◆ The working group report reckoned a certain database sizing. This was examined and it was noticed that the sizing was grossly underestimated with reference to database requirements.

*The Ministry replied that the estimate for the disk storage indicated in the working group report was based on actual data expected to be captured in flat files. The Ministry further informed that under RDBMS environment, disk capacity requirement was taken as four times of the actual data size and they provided 50 GB. They maintained, therefore, that the disk storage requirement given in the report of the working group was not underestimated.*

*This contention of the Ministry was verified by the technical consultant appointed by the C&AG who reported that the actual position of hardware disc storage was found to be 20 GB vis-à-vis the actual order placed for 25 GB for Delhi, Mumbai and Chennai. In Chennai the configuration was upgraded to 50 GB subsequently.*

- ◆ The issue of centralised versus decentralised operations was discussed in detail and "centralised" network processing at 36 locations was preferred over "totally decentralised" processing. The conceptual plan however limited itself to implementation at the three major cities of Delhi, Mumbai and Chennai. It did not discuss how its reach would be expanded to the 33 other centres. The conceptual plan did not mention that the expansion beyond the three cities would need its own conceptual plan using the experience gained and lessons learnt in the first phase of execution of the project.
- ◆ The role of National Computer Centre, as visualised in the conceptual plan, was that of development, testing, documentation and maintenance of application software. However, this role was expanded to include a greater role of integrating the operations in the office of the DIT(s).
- ◆ Neither the working group nor the Ministry also visualised the need for centralised PAN data base till the implementation of the first phase of the software system. Since the creation of central PAN database was implemented at a later date by the department, the sizing in all respects of database, network requirements have not been re-worked to give a reasonable response time.

Hardware  
evaluation

### 3.2.9.1 Specification, design and procurement phase

#### Phase I centres

Procurement  
of under-  
configured  
hardware -

(i) For procurement of hardware, a Technical Evaluation and Procurement Committee (TEPC) was set up by the Government in December 1993 which in turn set up a Technical Sub-Committee (TSC) to work out the specifications for hardware requirements, finalise the tender documents and conduct technical evaluation. The Systems Requirements Specification (SRS) was required to be finalised before tendering and procuring hardware. However, before finalisation of the SRS, open tenders for supply of hardware were invited in December 1993 against which bids from 11 vendors were received, out of which five solutions from four vendors were shortlisted for further evaluation.

The TSC conducted technical evaluation test on five shortlisted solutions of four vendors between May-June 1994. The evaluation was conducted on a set of benchmark programme around the ORACLE database and the requirement was projected as 25 transactions per second and response time of 10 seconds. None of the tenders matched the desired specifications and all the tenders were found to be under-configured. The TSC, however, recommended two solutions, namely (i) ES-9000/210 and (ii) RS-6000/590 offered by M/s Tata Information Systems Limited (TISL). The department finally selected RS 6000/590 system and placed the order on M/s. TISL in July, 1994 at a cost of Rs. 1990 lakh. Instead of procuring hardwares of under configured systems, retendering could have been done to procure the hardware of desired specification after finalisation of the SRS.

*The Ministry have accepted the observation regarding procurement of under-configured hardware. However, they stated that retendering was not done as the hardware was selected based on comparable performances of the shortlisted solutions in technical evaluation and it was expected that the performance of these systems would improve by about 30 percent once the solution is implemented in the client/server model.*

*The reply is, however, not satisfactory as the retendering was essential to procure the hardware of desired specification after finalisation of SRS.*

**Tender process vitiated**

**(ii)** Development of a large scale information system necessarily involves creation of the SRS as part of the standard procedure. The procedure followed by the TSC was to call for tenders and select the configuration that was best among the tenders. Adoption of this procedure led to selection of only one tenderer and rejection of the rest at technical evaluation stage. Having made the selection, the department followed the usual practice of not opening the commercial bids of rejected tenders at technical evaluation stage. Since commercial bid of only one vendor (M/s. TISL Ltd.) was opened, it is difficult to state whether the department obtained the most competitive rates.

*The Ministry replied that invitations for revised commercial bids clearly stated that the commercial bids of only technically shortlisted tenderers will be opened, and therefore tender process was not vitiated in any manner.*

*However, since none of the bids satisfied the tender specifications, technical shortlisting was irregular.*

**Inadmissible items**

**(iii)** It was further noticed that the commercial bid of M/s. TISL included an amount of Rs. 208.64 lakh towards marketing expenses, overhead recovery and local service charges. Marketing and other overhead expenses are not the items to be accepted under Government purchases. In highly technical purchases also, overhead expenses are not normally covered and paid by the purchaser, hence this change was avoidable.

**Lack of synchronizing of hardware purchase and software developments**

**(iv)** Further there was no coordination in procuring hardwares and developing the application systems. The contract provided for delivery of hardwares by

October 1994 and development of software application systems by November 1995. It was however, observed that the first machine was delivered around October 1994 and installed in January 1995 whereas out of the eight software application, the first was accepted and made operational in mid-1995. Given the obsolescence rate of hardware in the industry, the decision taken to procure hardware in advance was not a prudent one.

**Cases of avoidable expenditure**

(v) In addition, the following cases of avoidable expenditure amounting to Rs.41.59 lakh were noticed on procurement of hardware items:

1. M/s.TISL offered discount of 35.95 percent on the procurement of hardware items. The department, however, availed of only 30.92 percent resulting in a loss of Rs.9.35 lakh.

*The Ministry have accepted the audit observation.*

2. It was observed that the department excluded certain additional hardware items and computer accessories from the offer of M/s.TISL and reduced the value of these items in the order placed on the firm. However, the department failed to reduce the proportionate overhead/warranty charges necessitated due to reduction of these items in the value of the order resulting in loss of Rs. 14.29 lakh.

*The Ministry have accepted the audit observation.*

3. In December 1997, tenders were invited for upgradation of memory from 8MB to 16MB in respect of 740 PCs procured in October 1994 and for procurement of 2000 PCs. M/s. Siemens Ltd. and M/s. HCL Ltd. were found lowest in the bids but they did not accept the order for upgradation job due to complexities of mismatch of memory modules and accepted the orders for supply of PCs only. However, the department placed the order for upgradation job on M/s. TATA IBM which was found third lowest in the bids without invoking the clause for getting the work done at risk and cost of both the lowest firms resulting in loss of Rs. 5.55 lakh.

*The Ministry replied that it was desirable to place the order on M/s. Tata IBM from the maintenance point of view since the original systems were supplied and installed by them. However, they did not reply on their failure to invoke the clause for getting the job done at risk and cost of both the lowest firms.*

4. One OCR option file server PS 277 alongwith OCR image and two softwares were purchased from TISL in July 1994 at the cost of Rs. 5.00 lakh. However, the same was not found useful for department's work for want of training expertise and could not be utilised.

*The Ministry replied that OCR could not be used as the source documents, viz., Form 49A, Challan forms and tax returns, etc., required some*

*revisions and application software could not be implemented because of staff resistance.*

5. Modems were to be installed on the lease lines at MTNL end. The department however purchased 42 ASM-20 Modems from M/s. TISL in July 1994 without evaluation of actual needs of MTNL. However, actual requirement of modems was decided in June 1995 and 12 modems were also purchased in July 1995 from M/s. Motorola, which were cheaper by Rs.17,620 each in comparison to the earlier one. These modems could also not be put to use by December 1995 as the lease lines were not ready. Thus, haste in procurement of 42 modems resulted in avoidable expenditure of Rs. 7.40 lakh.

*The Ministry replied that 42 modems were installed and were used. Additional modems were also procured as per the requirements of MTNL and supplied to make the leased lines operational. The Ministry, however, did not justify the procurement of 42 modems without obtaining competitive rates and without finalisation of the actual requirements with MTNL.*

### **Phase II centres**

#### **Procurement of hardware**

(vi) In March 1997, the Committee on Non-Plan Expenditure (CNE) approved the proposal regarding supply, installation and commissioning of computer systems and peripherals for 33 centres by replacing the existing SN-73 system. Open tenders were invited in April 1997 and the lowest tender of M/s Tata IBM was selected by the TEPC for supply of hardware, software, peripherals and training at a total cost of Rs. 748 lakh after taking into account the deduction of an amount of Rs. 42.86 lakh towards buy-back of the old SN-73 computer systems. A letter of intent was issued by the DIT (Systems) in September 1997 for purchase of hardware for Rs. 729 lakh. It was however, noticed that against the target period of four to six weeks for delivery and installation of hardware, there was delay in installation that ranged from 6 to 33 weeks in the 33 centres due to delay in site preparation, terminal banks etc., and no penalty could be imposed on the contractor as the delay was on the part of the department.

*The Ministry have accepted the audit observation.*

#### **Procurement of PCs for Deputy Commissioners and above**

(vii) On 3<sup>rd</sup> March 1997, the C.N.E. approved providing of 1077 PCs to the officers of the level of Deputy Commissioners and above with the stipulation that 50 percent of these officers be provided with personal computers (PCs), dot matrix printers (DMPs) and Constant Voltage Transformers (CVTs) in the year 1996-97 and the balance in the next financial year. The department procured 525 PCs/DMPs/CVTs in March 1997 and 552 PCs/DMPs/CVTs in June/July 1997 from M/s. Tata IBM and from M/s. Elecon Engineers. It was noticed that the department had finalised the requirement of 1077 PCs/DMPs/CVTs during the year 1996-97. However, open tenders were

invited for only 525 PCs/DMPs/CVTs on 7.3.1997 instead of 1077. Barely three months later, i.e. on 30<sup>th</sup> June and 1<sup>st</sup> July 1997, the department placed repeat orders for the balance 552 PCs/DMPs and CVTs. These repeat orders were placed on the same firms, at the same rates and without inviting fresh quotations/tenders though the value of the order exceeded Rs.500 lakh and was for more than 50 percent quantity was in contravention of Government purchase procedure. Further, had the department invited tenders for whole quantity of 1077 in March 1997 itself, better competitive rates could have been obtained.

*The Ministry stated that repeat orders were placed on Tata IBM after ascertaining that there had been no change in the prices, taxes, etc. The reply is not tenable as the competitive prices were not obtained from all the five technically short listed firms who submitted their bids in March 1997 and placing the repeat order for more than 50 percent quantities after checking up with Tata IBM alone, was against the Government purchase procedure*

**Procurement of  
PCs for  
Assistant  
Commissioners/  
ITOs**

**(viii)** To strengthen the infrastructure in the Department, it was decided to procure 4,900 PCs, DMPs and CVTs for ACs/ITOs. An amount of Rs. 2640 lakh was sanctioned in August 1997 so as to cover 2000 officers (40% of the total strength) during 1997-98. Tenders were invited in December 1997 and the TSC after technical evaluation of various offers recommended in March 1998 to place the orders from the firms as detailed below:

i)	M/s. HCL Infosystems Ltd.	1000 PCs
ii)	M/s. Siemens Nixdorf Information Systems	500 PCs
iii)	M/s Wipro Infotech Group	500 PCs

The formal orders were placed on 18.3.1998 with the stipulation to supply the PCs by 15.4.1998. However, the PCs were actually received between April and June 1998 and most of the PCs were installed between May - September 1998 for want of proper space/power points etc which could have been avoided by proper planning.

### **3.2.9.2 Installation acceptance and implementation**

#### **Phase I centres**

**Delay in Site  
Preparation**

**(i)** The department assured C.N.E. as well as Secretary (Expenditure) that the sites would be ready before the receipt of the hardware and the system would be operational in three Regional Computer Centres (RCC) by August 1994. It was noticed that although the hardware was procured between September to November 1994, CBDT sanctioned (October 1994) only Rs. 353 lakh for site preparation work to be completed by November 1994 and sites at the three RCCs were not ready for installation of equipment till September 1995. Additional funds amounting to Rs. 67 lakh (Rs.40.74 lakh for Delhi, Rs.18.69 lakh for Madras and Rs.7.57 lakh for Bombay) were sought in November 1995 by the three centres. Audit scrutiny revealed that the funds earmarked for the site preparation were diverted and incurred without sanction as detailed below:

- In Chennai, it was noticed that Rs. 11.12 lakh earmarked for installation of diesel generator sets were diverted towards the preparation work of terminals and Central Treasury Unit rooms which was not covered in the original sanctioned plan. Further, this was done without the approval of the competent authority.
- Rs. 6.52 lakh were spent without approval on items other than site preparation such as purchase of computer stationery, water cooler, photocopier, stamps and furniture etc.
- In Delhi, under the approved plan, the site preparation involved only 4500 sq. feet at fourth floor of R.K. Puram office building. However, the department obtained an additional 4500 sq. feet at 2<sup>nd</sup> and 3<sup>rd</sup> floor at the same place and converted it into a site without obtaining the approval of the competent authority resulting in excess expenditure of Rs. 40.74 lakh over the sanctioned funds.

*While confirming that installation of hardware was delayed as the sites could not be prepared in time, the Ministry explained the delay on the part of many agencies involved such as CPWD, electricity authorities, fire control, etc. The reply is however not acceptable as the department should have worked out the time required for site preparation after taking into account all the factors well before finalisation of order for procurement of hardware.*

**Delay in installation of hardware**

(ii) The hardware items which were received between September 1994 and November 1994 were actually installed between January 1995 to December 1996. Therefore, hardware worth Rs. 1370 lakh remained unutilised for a substantial period ranging from 3 to 26 months resulting in blocking of funds besides obsolescence in hardware.

*The Ministry stated that bulk of the hardware items were installed between January-February, 1995 in all the three regional centres. This reply is not acceptable in audit as it was noted that essential items such as PCs, CVTs, UPS and DMPs were not installed till June-December 1996 without which the system hardware (RS 6000-590) worth Rs.1370 lakh remained unutilised.*

**Phase II centres**

**Delay in installation of PCs**

(iii) Out of the 1077 PCs procured, only 890 PCs could be installed till September 1998 against the target of May/August 1997. The remaining PCs have not been functional till March 2000 due to non availability of sanctioned power supply.

**Operations**

(iv) The tender document mentioned that the desirable response time should be 3 to 5 seconds for queries. It was noticed by the IT Consultants engaged by C&AG that this critical parameter of performance could not be achieved by

the system, as it takes 5 to 40 minutes to respond to a typical query, thereby implying either that the hardware is inadequate for such an operational profile or that the design of the database and the requisite application portion did not take into account the nature of queries to be handled. As the system has so far been used only for two applications (PAN<sup>1</sup> & TAS<sup>2</sup>) the extensive use of AIS<sup>3</sup> and AST<sup>4</sup> would considerably slow down the system.

*The Ministry replied that it was not possible to test the response criteria as mentioned in the tender document in the true spirit and sense of the document. Therefore, it was consciously decided to prepare the prototype benchmark test on the data and data bases that were readily available with the department.*

*The Ministry, however, neither replied as to the result of such prototype benchmark tests nor on the present response time for a typical query.*

**Software evaluation-**

**Procurement of ORACLE RDBMS software**

**3.2.10 Specification, design and procurement phase**

**3.2.10.1(a)** To meet the requirements of the application systems, the department decided to procure an appropriate Relational Database Management System Software (RDBMS). Limited tenders were invited in March 1994 from three distributors/vendors and after technical evaluation, the lowest offer of M/s Oracle India Limited was accepted at a total cost of Rs. 283.83 lakh including technical support and on-site support charges for four years for their ORACLE Software. The order was placed in December 1994 to be supplied within six weeks.

**Non-utilisation of OCR software**

**(b)**As per terms and conditions of the tender for design and development of application software, the key characteristics of the application systems were to capture data through OCR from hand-written / printed / type written / bar coded documents. It was also clarified that the applications developed by the consultant should be capable of utilising the data captured through OCR. The software consultant was to supply OCR software and develop applications software to intelligently recognise alphanumeric characters before converting them into ASCII format.

The purpose of using OCR and bar code technology was to avoid any need of data entry. It was, however, noticed that none of the application softwares developed by M/s TCS were capable of utilising the data captured through OCR using bar code technology in clear violation of the tender conditions. Further, though the contract for application software was awarded in September 1994 and applications were received between May 1995 to May 1997, it was only in November 1998 that the department asked the firm to deliver the OCR software. However, OCR software could not be used at this stage for the following limitations:

<sup>1</sup> Permanent Account Number (PAN)

<sup>2</sup> Tax Accounting System (TAS)

<sup>3</sup> Assessee Information System (AIS)

<sup>4</sup> Assessment Information System (AST)

- i) The forms for PAN were not designed for OCR compatibility .
- ii) Software recognition of hand written characters are complex and were not listed as a requirement in the tender.
- iii) Indian type written fonts do not conform to OCR standards.
- iv) Necessary hardwares (scanners) and software required for use of OCR technology were not procured.

It was seen that while accepting the application software, OCR requirement as envisaged in the tender document was not fully considered by the department. Failure to use OCR software and bar code technology for allotment of PAN resulted in outsourcing the work relating to data entry at an avoidable cost of Rs. 82.08 lakh during 1995-96 to November 1998.

*The Ministry stated that the department has deliberately gone slow on the implementation of OCR solution in view of slow acceptance and implementation of the Assessment System due to staff resistance. It was further stated that various forms were also needed to be specially designed for meeting the requirement of OCR and training based on variation of handwriting and fonts. The use of OCR software for PAN data was not envisaged by the department at that stage. However, while floating the tenders for data entry of PAN forms, option was given to the tenderers to offer OCR based solution for which none of the vendors gave any solution based on OCR.*

**Application Software**

(c) The department envisaged to build city/region-wise database of all the taxpayers. Accordingly, it was decided to develop nine applications system as detailed below:

- (i) Assessee Information System (AIS)
- (ii) Assessment Information System (AST)
- (iii) TDS Information System (TDS)
- (iv) Tax Accounting System (TAS)
- (v) Individual Running Ledger Account System (IRLA)
- (vi) Enforcement Information System (EIS)
- (a) Search and Seizure      (b) Survey      (c) Tax Evasion Petition  
and (d) CIB System
- (vii) Management Information System (MIS)
- (viii) Resources Management System (RMS)
- (a) Manpower Management System      (b) Physical Resource System
- (c) Financial Resource System and      (d) Pay-roll System
- (ix) Judicial Referencing System (JRS)

The department invited tenders in February 1994 for engaging the services of a software consultant for system analysis, design, development and implementation of application software for the above listed application systems and awarded the contract to M/s TCS at a total cost of Rs. 72.12 lakh in September 1994. However, the Judicial Referencing System was taken out from the above contract subsequently and was procured from another firm

thus reducing the total contract value to Rs. 67.06 lakh. Test check of the records in this regard revealed as under:

**Prioritisation of application software systems**

(d) The department envisaged to build, city/regionwise database of all the tax payers. In pursuance of that, 9 application systems were decided to be developed. The department, however, did not attempt to distinguish integrated components of the software system and prioritisation of the systems. All the 8 systems (except JRS) were decided to be implemented at the same time. It may be mentioned that out of 8 application software systems, 5 systems (AIS, AST, TDS, TAS & IRLA) are related to on line allotment of PAN, processing of tax returns database for tax deducted at source, tax payments received and comprehensive Individual Running Ledger Accounts of the assesseees. Remaining 3 systems (EIS, MIS & RMS) are independent by themselves. It was, however, noted that M/s.TCS was to undertake complete development, testing, implementation and acceptance of all the 8 systems without any inter se priority by October 1996. It was further noted that only 2 systems, AIS & TAS, were developed in July-August 1996 and other 2 systems (AST & IRLA) were developed in 1997 alongwith 3 systems, EIS, MIS and RMS, while the system for TDS has not been developed till March 2000. The field study revealed that since all the applications have been given the same priority, the implementation was not completed even in one city/region covering all the functions. Planned prioritisation, development and implementation would have resulted in saving of cost, time and efforts and early monitoring/processing of crucial data with revenue implications.

**Deviation from the contract agreement**

(e) As per the contract agreement, M/s.TCS was to develop eight application softwares at a total cost of Rs 67.06 lakh. However, scrutiny of records revealed that as the CBDT desired to allot PAN number to some VIPs at the time of inauguration of the computer centre, a new application software called the Initial PAN allotment system (IPAN) was procured from M/s. TCS which was not originally covered in the contract agreement. An amount of Rs 3.30 lakhs for the extra work on this account was paid to M/s. TCS. In addition, due to various changes made by the department during the development of softwares, extra payment amounting to Rs. 8.70 lakh was also made to the vendor.

*The Ministry accepted that IPAN was not originally envisaged. It was, however, stated that decision to put a batch processing system module for quick allotment of PAN under IPAN application was taken up in all the three cities instead of waiting for development of all applications to utilise the costly hardware.*

**Delay in development of software**

(f) While inviting tenders (February 1994) for development and implementation of software, the tentative period envisaged for completion of the whole task was six months. M/s CMC whose rates were the lowest had agreed to complete the whole task within a period of six and a half months. The Department had ignored the above time frame and awarded the contract to

M/s TCS in October 1994 by allowing a period of 14 months which was later on extended to 18 months and subsequently to 24 months. However, barring only TAS and AIS the remaining softwares were installed in Chennai, Delhi and Mumbai after a delay ranging from 6 to 14 months beyond the extended period.

*The Ministry stated that despite many factors delaying the project, almost all the applications except TDS were completed approximately within the revised time frame. The reply is, however, not acceptable being factually incorrect, as all the five softwares viz. IRLA, EIS, MIS, RMS & AST have also been delayed even after taking the revised time frame for their completion.*

**Cases of  
avoidable  
expenditure**

**(g)** The following cases of avoidable expenditure amounting to Rs. 83.25 lakh were noticed on procurement of software items as detailed below:-

1. There was a delay of 10 months in installation of Oracle software at Mumbai and Chennai. However, payment for on site support charges made to M/s.Oracle India was adjusted only for 3 and 6 months respectively resulting in excess payment of Rs. 6.60 lakh.
2. TEPC in August 1997 had not recommended procurement of additional licenses for Oracle software as the existing 775 licenses were concurrent and adequate. However the department procured (November 1997), additional 13 licenses costing Rs. 1.27 lakh for Delhi where 290 licenses were already existing against 227 trained users.
3. The department procured 397 additional sets of documentation and media sets from M/s. ITC at a cost of Rs. 9.58 lakh which was avoidable as the department was authorised to make duplicates of documents from the sets offered free of cost alongwith 400 licenses.
4. As per the offer of M/s. Oracle India, on-site technical service for 30 days was included in the Annual technical support. It was also envisaged by the firm that on-site technical service would not be needed beyond 30 days and in the event of any need for further assistance, pricing would be on a mutually agreed basis. While the training should have been arranged in a manner that after 30 days on site assistance, no further on-site help was needed from Oracle, it was noticed that training for use of Oracle software was imparted by M/s. Oracle India to 40 departmental persons towards the end of 1995. It may be noted that these persons were already trained in RS 6000 Computer Systems. The department in addition to the payment of Rs. 48.83 lakh as annual technical support fee, paid Rs. 65.80 lakh for on site support charges for five years from January 1995 to January 1999 which could have been avoided if advance plan for training was in place and trained persons were available in the department from 1996.

*The Ministry have accepted the observation but stated that the training of department personnel has helped in reduction of on site support in recent years in 1998-99 and 1999-2000. However no justification was given for*

*not utilising the services of trained personnel to reduce on site support charges during 1996-97 and 1997-98.*

**Systems requirements specification (SRS)**

**(h)** The SRS pertaining to software was prepared by M/s TCS and was found conforming to IEEE\* specifications. It was however, noticed that though response time of six seconds was included in the tender, the same was ignored in the SRS developed by M/s. TCS. The department also did not enforce on M/s. TCS to commit on the issue of response time in the SRS. The response time, thus, was accepted as non-critical parameter in assessing the performance of the vendor. It may be noted that software requirement and hardware specifications must match to obtain specified response time.

*The Ministry replied that response time is not normally covered by the SRS. This reply is not acceptable as the hardware and software must synchronise to meet the specifications.*

**Software design document (SDS)**

**(j)** Development of a comprehensive software depends largely on how well the SDS is derived from the SRS. The SDS, as such, is required to provide adequate information for writing codes compatible with hardware sizing. The standard procedure, therefore, is to finalise SDS before firming up the hardware sizing. The issue of hardware sizing was examined by audit from two angles :

- (a) whether SDS was prepared on the basis of adequate information, and
- (b) whether hardwares already procured before preparation of SDS will be adequate in terms of department's needs.

The audit examination revealed that the sizing estimates presented in the SDS were inadequate based on certain assumptions. As regards adequacy of hardware already purchased, it was noticed that the RCCs are already facing shortage of disk storage. Moreover, the hardware it appears, will be grossly inadequate once the system grows to its full potential.

*The Ministry stated that main reason of shortage of disk space was on account of space occupied by the photograph and signature file of the PAN applications and these will be removed from the system and kept as back up on a off line magnetic media after the job is over.*

*The reply of the Ministry is to be viewed in the light of the fact that allotment of PAN numbers, their revision, frequent use for verification and additional new assessees would make ever increasing demands on the disk space that is already inadequate now.*

**Installation, Acceptance and Implementation**

**3.2.10.2** It was noticed that the ORACLE software which was to be loaded by January 1995 was actually loaded on the main hardware (RS 6000) as well as 760 PCs connected with servers between March 1995 to June 1996, February

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\* Institute of Electrical Electronic Engineering

1995 to December 1996 and February 1995 to September 1996 in Chennai, Delhi and Mumbai respectively.

**Software testing and acceptance procedures**

(a) The department did not envisage clear procedures for acceptance/testing of the software and the tendency was to wait for modules to be made operational so that testing could be carried out live. It was however, noticed that while considerable effort and planning went into acceptance and implementation of IPAN, TAS and AIS, similar emphasis was not placed on acceptance of other modules.

*The Ministry have accepted the audit observation stating that the delay in acceptance of various modules was due to shortage of technical personnel in the DIT (System).*

**Operation**

(b) Detailed scrutiny of the operation of the various application software revealed the following:

**Permanent Account Number (PAN) /Initial PAN allotment systems (IPAN)**

(i) The working group set up to examine the overall computerisation process emphasised the need for a system of allotment of unique PAN to all tax payers so as to form a key for inter system linkages between different software applications used in the department. It was also recommended that the PAN should have in built safeguards to prevent allotment of duplicate/ multiple PAN and should ensure up to date information (including the assessing officer jurisdiction) of an assessee. The report also emphasised the need for devising a new Unique Identification Number which should not only identify a tax payer uniquely but also should be small and easy to use. Keeping this in mind, a new series of PAN was evolved comprising of two parts, namely:

- (a) Phonetic Permanent Account Number (PPAN); and
- (b) Permanent Account Number (PAN).

While awarding the contract to M/s TCS, IPAN was not amongst the systems envisaged. The IPAN Application Software was an abridged version of AIS Software to be used (a) for one time PAN allotment in Delhi, Mumbai and Chennai (b) during peak periods at the time of due dates for filing of returns and (c) for other cities and centres for all times. A detailed scrutiny of the records revealed as under :

**Non-fulfillment of targets**

(a) Under the Central Action Plan for the year 1998-99, the Board decided to achieve 100 percent targets by 31.10.1998 in respect of complete PAN allotment, dispatch of intimation letters and PAN cards and migration of data to AIS and 100 percent on-line allotment of PAN for applications received during 1998-99 by 31.3.1999 for Chennai, Delhi and Mumbai regions and 70 percent for 33 centres for complete PAN allotment, dispatch of intimation letters and PAN cards for applications received during 1998-99 by 31.3.1999.

However, detailed scrutiny of records revealed that only in six centres out of 33 centres (Nasik, Kolhapur, Bhubneshwar, Ranchi, Agra and Jodhpur) have

completed the targets. Chennai, Delhi and Mumbai and eight centres out of 33 centres could not achieve the desired targets as given below :

Sl. No.	Name of the centre	Total number of forms received for PAN	Percentage of PAN numbers allotted (out of column 3)	Percentage of intimation letters issued (out of column 4)	Percentage of PAN cards issued( out of column 4)
1	2	3	4	5	6
1.	Delhi	1220402	79	64	60
2.	Mumbai	1837565	78	77	47
3.	Chennai	633188	84	89	85
4.	Coimbatore	138360	45	7	7
5.	Jabalpur	460543	3	24	12
6.	Patna	357624	33	33	66
7.	Allahabad	234417	57	13	13
8.	Visakhapatnam	308207	28	2	2
9.	Cochin	322284	15	16	16
10.	Trivandrum	177946	25	31	24
11.	Calcutta	1763632	1	Nil	Nil

In remaining 19 centres, though PAN allotment target was achieved, the targets for intimation letters and dispatch of PAN cards were not achieved at all. The facts remain that out of 36 centers, in 30 centers targets as decided under Central Action Plan for the year 1998-99 in respect of allotment of PAN and issue of PAN cards were not achieved by March 1999.

*The Ministry affirmed that 100 percent targets could not be achieved in the allotment of PAN numbers as on 31.3.2000.*

**Delay in the disposal of grievances**

(b) As per the Central Action Plan it was directed by the Board in July 1998 that no grievance/ complaints should be kept pending for more than a month. The system provides for PAN preview under which the assessee's details which are to be printed on the card are displayed on the screen and these were required to be matched with the details mentioned in Form 49A. However, despite provision of preview, huge number of complaints regarding printing of wrong name, incorrect date of birth, father's incorrect name, mix-up of photographs and signatures in the PAN cards issued to the tax payers were noticed. These deficiencies are indicative of lack of prescribed preview checks.

Test check of the records of RCC, Delhi revealed that the centre did not maintain proper records prior to July 1998 to show the number of complaints received and disposed of. Even after July 1998, there were delays in the disposal of PAN related to grievances cases and out of 76,378 complaint cases only 896 grievances (1 percent) were disposed of and 75,482 were pending as on May 1999. Further analysis of outstanding complaints revealed that 70,139 complaints pertaining to the period after July 1998 were sent by the CCIT office Delhi in February 1999 only.

**Faulty designing**

(c) It was observed that the entire income tax system is highly decentralized in terms of operation. However, the PAN system was designed to be centralized. The conceptual plan document described the proposed system as centralized for processing and de-centralized in terms of data input and output. While this concept was seen to be more workable from the RCC standpoint, it was found weak from the NCC standpoint.

**Non-availability of security feature**

(d) The IPAN design, based on generating a unique PAN number using “phonetic” matching was found over emphasised since during PAN allotment no supporting documents for proof of age etc. were made mandatory for submission. It may be observed that the system of existing procedures could not effectively bar issue of multiple PAN numbers to the same person. Evidently, PAN cards were not designed to contain security features as particulars given in the PAN application form were not got verified and these were accepted on the basis of self attestation.

**Assessee Information System (AIS)**

(ii) AIS allows on-line allotment of PAN by the assessing officer. The function requires that the AO's terminal should be connected to the RCC and the NCC over the network. The system would create the Assessee Information database of all the taxpayers based on the information contained in the modified Form 49A and would have the facility to update the information on the new assessees. It was envisaged that the AIS would form the hub for the proposed scheme of computerisation as the PAN was the index key to integrate most of the Application Systems. To achieve this, it was necessary that all PAN allotted under IPAN should be migrated to AIS database so as to interact with other systems like TDS, TAS, IRLA and AST.

**Delay in implementation**

(a) It was however, noticed that AIS was installed in April 1996 in Delhi, September 1996 in Mumbai and October 1996 in Chennai and 2.98 lakh, 1.10 lakh, & 0.12 lakh PAN allotments were made under AIS as on March 1999 respectively. Though the system was implemented between May 1998 to January 1999 in 10 other centres out of 33, only six PANs were allotted through AIS in only one centre at Rohtak as on 31.3.1999.

Further, as regard to 100 percent transfer of PAN data to AIS, it was noticed that out of 6.72 lakhs, 13.24 lakhs and 5.21 lakhs PANs allotted in Delhi, Mumbai and Chennai only 1.54 lakhs (23 percent), 0.88 lakh (7 percent) and 0.19 lakh (4 percent) transfers could be made as on March 1999 respectively. The reason for shortfall in transfer of data was that the AOs were to identify PAN records pertaining to their jurisdictions from IPAN and send a list to the concerned RCC on a floppy. Only then, these cases could be transferred to the respective AOs in AIS database. Although AO code was made mandatory in the originally developed software but the same was made non-mandatory at the instance of RCC, Delhi owing to urgency in the allotment of PAN with the result that AOs were unable to identify the cases from IPAN. Thus due to non-transfer of PAN data to AIS, benefit of computerisation could not be achieved as other applications like AST, IRLA, TAS etc. could not be used till March 1999 effectively as these, in turn depended on AIS.

*The Ministry stated that as on 31.3.2000, number of on line allotment of PAN through AIS and number of PAN migrated from IPAN to AIS were 6.68 lakh and 100.68 lakh respectively. The Ministry, however, did not furnish the data on items pending for migration from IPAN to AIS and further improvements needed, if any, in the system.*

**Shortcomings  
noticed in the  
AIS software**

**(b)** Scrutiny of records revealed that the AIS was not properly designed taking into account the practical situation of working in the department as a result of which serious bottlenecks occurred during its implementation. Though a number of modifications were required as pointed out by various users, these were not acted upon as detailed below:

- (i) Option of deletion of PAN in AIS was not provided in the software with the result that a number of duplicate PAN generated by AOs could not be eliminated from the database.
- (ii) The facility to print the labels for despatching the PAN cards was not available due to which manual procedures had to be adopted that contributed to delay in despatch.
- (iii) There was no provision for dual/ additional charge facilities for AOs with the result that if any AO holding additional charge should allot PAN on AIS for the additional charge, the AO code of his substantive charge would automatically be populated in the AIS, instead of the AO code of the additional charge.
- (iv) The system provides that records complete in all respects could only be transferred from IPAN to AIS. It was noticed that IPAN records, though complete with reference to core fields but incomplete as to non-core fields, could not be transferred. This restriction on transfer of records to the AIS kept the records pending for correction at the RCC, whereas such correction in the non-core fields could have been easily carried out by the concerned AOs subsequently.
- (v) Core fields in IPAN and AIS were different which resulted in rejection and non-transfer of records from IPAN to AIS.
- (vi) AIS operations seem to be limited primarily due to the unavailability of the network at the AO's desk.

*The Ministry stated that necessary modification in the system wherever essential have been carried out and PAN cards have been printed.*

**Assessment  
Information  
System (AST)**

**(iii)** The AST envisaged computerised processing of returns filed. The main purpose of this application was to facilitate calculation of tax, interest chargeable under scrutiny, time barring/ due date checks, deduction limit validations, and to generate notices for scrutiny, penalty proceedings, as well as to monitor appeal cases etc. Although the AST was installed in Delhi, Mumbai and Chennai in June 1997, November 1997 and December 1997 respectively, after modifying the system twice, very little use was made of the system in these centres as detailed below:

In Chennai, the implementation of the system could be taken up only in December 1998 after allotment of PAN to all assesseees and transfer of IPAN to AIS, transfer of arrear demand into IRLA and completion of LAN.

In Delhi, although the system started functioning from June 1997 till March 1999 out of a total of 484 ranges/ circles/ wards, in eight ranges/wards only 4526 returns could be processed. Further, in one special range and three circles, only five returns could be processed indicating poor utilisation of the software.

In Mumbai, 4 special ranges were identified to run the system, but none of the DCs made use of AST till March 1999. The system was also not operational (March 1999) in the 33 centres covered under Phase-II.

Thus, the AST module has only undergone simple testing and has not been put into use even though it was available for more than two years.

*The Ministry accepted the observation stating that the system has not been on the desired pace on account of various reasons including staff resistance. It was further stated that the Board has issued instruction in January 2000 to take up salary returns using the AST system.*

**Tax deduction at Source Information System (TDS)**

(iv) The purpose of TDS was to maintain two databases viz. (i) Tax deductors information database and (ii) TDS database. To achieve this, a Tax Deduction Account Number (TAN) was to be allotted to each deductor paying tax. The system was developed to assist the A.O. in performing various activities leading to generation of MIS Reports. It was, however, noticed that the system which was to be developed in October 1996 could not be developed till March 2000 due to deficiencies found in the source documents.

**Tax Accounting System (TAS)**

(v) The objective of TAS was to create and maintain region-wise database of the tax payments received by the Department. Taxes are paid by the assesseees in authorised banks through challans. On receipt of challans/ refund vouchers in Central Treasury Units from banks, these are verified and processed on computer to generate various reports and registers. The TAS was implemented from January 1997, August 1996 and December 1996 in Chennai, Delhi and Mumbai respectively and between May 1998 to August 1998 in the 31 centres. Audit scrutiny revealed as under :

**Shortfall in processing of challans**

(a) Scrutiny of records revealed that against the receipt of 132.74 lakh challans in respect of tax deposited and 80.92 lakh refund vouchers received from the banks during the year 1998-99, the number of challans and refunds processed in all the 36 centres were only 22.29 lakh (16.79%) and 13.68 lakh (16.92%) respectively and there had been a shortfall of above 75 per cent in three centres, 50 – 75 per cent in nine centres, 25 – 50 per cent in ten centres and less than 25 per cent in the remaining 14 centres.

**Inordinate delay in preparation of detailed account**

(b) The detailed account showing the collection received during the month, major/minor head-wise, was also to be forwarded to the ZAO in the prescribed

proforma by 14th of the following month. It was however noticed that there were inordinate delays in the preparation and dispatch of detailed accounts by the CIT to the ZAOs as on 31.03.1999 ranging from 1-3 months (7 centres), 4-6 months (11 centres) and more than six months (5 centres).

**Delay in generation of daily collection register/ refund register**

(c) Daily collection registers (DCR) and daily refund registers were required to be dispatched to the assessing officers by CTU in order to enable them to give credit, for tax paid by the assessee. Audit scrutiny revealed that despite computerisation of CTU activities, there were delays in the preparation of the daily collection register ranging from 1-3 months in eight centres, 4-6 months in 13 centres and more than 6 months in five centres. Delays in dispatch of registers led to delay in giving credits for the taxes paid and consequent delay in issuance of refund orders which resulted in avoidable inconvenience to tax payers besides payment of interest on refunds. Thus, there was no significant improvement in generation of DCR despite introduction of TAS software.

**Individual Running Ledger Account System (IRLA)**

(vi) The main objective of the IRLA was to generate a comprehensive Individual Running Ledger for each assessee which, inter alia would provide details of assessments and year wise up-to-date listing of all demands, collections and refunds that have taken place. Thus, IRLA was dependent on TAS (for collections), on AST (for demands, penalties and refunds) and on TDS Information System (for TDS payment). The role of PAN was very important for the success of this system, as it was necessary that in the Arrear Demand and Collection Registers (ADCR), PAN should be mentioned against the entries of each assessee.

Test check of the records revealed that although IRLA system was installed in May 1997, June 1997 and November 1997 in Chennai, Delhi and Mumbai respectively and in five other centres covered under Phase-II between April 1998 to September 1998, the system was not fully operational as the other systems viz. PAN, TAS, AST and TDS were not stabilised and the PCs supplied to the A.Os. were not networked. Only the work relating to inputting arrear demand on computers by some AOs was started. The centre-wise details were not available with the Department. However, in respect of 24 centres for which information was compiled, out of 1850 AO charges where work was started, only in 1286 charges work was completed and in nine out of 24 centres the percentage of short fall was more than 50.

*The Ministry have informed that the system has been installed in all the 36 centers and is in use in 20 centers though on a limited scale.*

**Enforcement Information System (EIS)**

(vii) The EIS was developed with a view to help the Investigation wing in speeding up investigation work with more effective control so as to ensure reliable, accurate and quick reporting. Under EIS, four operational areas, viz. (i) Search and Seizure, (ii) Tax Evasion Petitions, (iii) Survey and (iv) CIB Information, were identified for computerisation.

Although software for (i) to (iii) was stated to have been installed in Delhi in April 1997 and in Chennai and Mumbai in May 1997 the system was not

operational (March 1999) as the networking of the PCs provided to the officers in Investigation circles/ CIB circles had not been completed. As regards CIB system, the same was at the testing stage (August 1999).

**Management Information System (MIS)**

(viii) The objective of MIS was to provide the management with reliable, accurate and meaningful information at any point of time. Although the system was installed in May 1997 in Chennai, Delhi and Mumbai, it was not operational in any of the centres as the PCs provided to the Assessing Officers were not networked with the RCC/TBs. (March 1999.)

**Resource Management System (RMS)**

(ix) Although the software was installed in April 1997 in Delhi and in May 1997 in Chennai and Mumbai, allotment of Employees Code under Manpower Management System only could be implemented in respect of 30 centres for which information was made available and, out of 55054 employees, only 28422 (51%) could be allotted codes till March 2000.

**3.2.11 Specification, design and procurement phase**

**Networking evaluation-**

(1). The computerisation plan provided for inter-city and intra-city networking of the computer centres through 64 KBPS dedicated lines. There was no separate specification and design of either inter city or intra city network. The exercise of sizing the network vis-à-vis the requirements of the applications was not done formally. The VSAT-based alternative was ruled out since the service provider could not demonstrate the availability of adequate bandwidth. This decision seems unreasonable as the solution was evaluated in terms of unrealistic tender specification that required a vendor to show half a transponder of unused capacity in his resources at the time of bidding.

*The Ministry replied that in 1994, none of the tenderer was in a position to quote for V-SAT based solution as per requirement of the solution proposed. This reply is to be viewed in the light of the fact that the tender condition of 'half-a-transponder' as a spare bandwidth by the tenderers was unreasonable and was not based on any formal framework providing inter/intra city network and applications traffic analysis.*

The purpose of leased lines was to facilitate reliable, secure and faster access for error-free data transfer and to ensure 100 percent uptime. In all, three inter-city and 17 intra city (5 Delhi, 8 Mumbai and 4 Chennai) leased lines were sanctioned in August 1994 and funds amounting to Rs. 75.90 lakh were sanctioned by the Ministry for this purpose in November 1994.

**3.2.11.2 Installation, acceptance and implementation**

**Delay in setting up Terminal Banks (TBs)**

(i) To connect different Income tax buildings with RCC/NCC in order to facilitate decentralised input/output and to enable the users to work on various application systems, it was envisaged to setup 36 Terminal Banks (TBs) in 23 buildings (6 at Delhi, 13 at Mumbai and 4 at Chennai). An amount of Rs. 2.00 crores was sanctioned by the CNE in November 1994 for this purpose. As per the implementation schedule, the computerisation programme in Delhi,

Mumbai and Chennai was to be made operational during 1994-95. However, it was observed that out of 36 TBs (Delhi –12, Mumbai-20 and Chennai-4) only 25 (Chennai - 2, Delhi - 4 and Mumbai -19) could be commissioned till July 1996. In Mumbai one TB at Matru Mandir was not set up as of August 1999.

**Delay in Local Area Networking**

(ii) As per the contract agreement of July 1994, M/s TISL was to supply, install and put on network the entire system which included 760 PC terminals through Local Area Network (LAN) and Wide Area Network (WAN) within a period of three months. However, the networking of the entire system could not be made functional even after a period of more than 2 years, resulting in delayed implementation of the entire programme. In addition, the desired purpose of on-line activity with the main systems, to involve the users to work on various application systems as envisaged in the programme could also not be achieved.

**Delay in acquisition of leased lines**

(iii) It was envisaged to make the leased lines operational before the end of March 1995 and for this purpose advance payments amounting to Rs. 72.41 lakh were made to MTNL for obtaining 3 intercity and 16 intracity leased lines between December 1994 to March 1995 and for R.K.Puram - Vikas Bhawan in September 1996. However, it was noticed that the leased lines were actually made operational after a delay ranging from 11 months to 32 months. In addition one leased line between Mumbai RCC to Matru Mandir could not be installed till March 1999 as the concerned site was not ready. The delay in installation of leased lines resulted in non-availability of online co-ordination between the various centres as envisaged.

**Hiring of leased lines**

(iv) The main objective of obtaining dedicated leased lines was to ensure 100% uptime so as to provide uninterrupted on-line service at each of the offices. The department paid Rs. 72.41 lakhs during 1994-95 as advance rent and Rs. 142.20 lakhs as annual rent for the leased lines till March 1999. However, scrutiny of records revealed that against the 100% uptime for which payment was made, the leased lines were down frequently as detailed below:

(a) **Inter-city (3 lines):** The overall percentage of down time is given below:

Leased line between	Percentage of down time (in hours)		
	1996-97	1997-98	1998-99
Delhi RCC – Mumbai RCC	42.1	21	13.4
Delhi RCC – Chennai RCC	55	23.9	10.3
Mumbai RCC – Chennai RCC	71.6	25.98	31

**(b) Intra city (16 lines) :**

Leased line in	Percentage of down time (in hours)		
	1996-97	1997-98	1998-99
Delhi	37 to 85	11 to 31	9 to 29
Chennai	34 to 69	18 to 51	10 to 86
Mumbai	47 to 93	44 to 96	23 to 82

Considering the heavy down time, which at times was more than 96 percent of the total hours, the department should have made proportionate adjustment from subsequent payments as the intended benefit of getting 100 percent uptime required for uninterrupted on-line service could not be achieved.

**Cases of avoidable expenditure**

(v) Following cases of avoidable expenditure amounting of Rs.19.27 lakh were noticed during scrutiny of records:

1. In Mumbai region, the RCC was supplied with 22 constant voltage transformers in March 1996, out of which 7 were installed and 15 CVTs costing Rs. 3.84 lakh were lying idle. These CVTs were found to be in excess as each terminal bank had been connected to UPS systems.

*The Ministry have accepted the audit observation.*

2. In Mumbai, Rs. 5.42 lakh was incurred in April 1997 on site preparation to set up terminal bank at Mantrumandir. The structure erected at Matru Mandir had to be dismantled as it obstructed ventilation and light resulting in wasteful expenditure of Rs. 5.49 lakh.

*The Ministry have accepted the audit observation.*

3. The department had to pay advance rent to MTNL for acquiring lease lines and adjustment of rent was to be made from the date the lines were made available. It was observed that in respect of 10 circuits though there was difference between the dates the lease lines were actually made available and the dates when the rent was charged. However, department did not make adjustment in the rent paid to MTNL resulting in excess payment of rent amounting to Rs. 9.94 lakh.

*The Ministry replied that regular effort has been made to obtain adjustment against payment of leased lines.*

**Operations**

(vi) As stated earlier, the network that exists is a combination of leased line and dial-up circuits for wide area networking and internet LANs for local area networking. Almost all the software requirement specifications state as one of their major assumptions the existence of a high-speed reliable 64 kbps wide-area network. However, it was observed that the state of networking is not

adequate for on-line computing as was envisaged in the original conceptual document as also in the SRS for online component of the income tax information systems.

It was further noticed that the exercise of sizing the network vis-à-vis the requirements of the applications was not done formally. Though the network connectivity options were limited at the time the design was carried out, yet assumption of consistent network availability for many of the software modules has resulted in long delays in simple but essential operations like migration of PANs to AIS. This aspect needs to be examined taking the present available options and also factoring in the network uptime in the design specification. Further, no formal analysis of network traffic has been conducted.

**Training**

**3.2.12** The department conducted training courses for its officials (both technical/non-technical) working at various levels in order to familiarise them in computer usage by engaging outside vendors. Audit scrutiny revealed as under:

**Training of officers of the level of Deputy Commissioners (DCIT) and above**

(a) As part of the contract given to M/s. Tata IBM Ltd. for supply and installation of 1077 Pentium PCs for the officers of the rank of DCITs and above, the firm was required to conduct a five day, full-time training programme for 1080 officials covering office automation software and bilingual software at a cost of Rs. 3.60 lakh. However, audit scrutiny revealed the following:

(i) *Non-fulfillment of targets*

The department did not fix a target date for completion of training of 1080 officials. It was noticed that till January 1999 training was imparted to only 541 (50 percent) officials. The major shortfall in training was noticed in Delhi, Mumbai, Chennai, Chandigarh and Ahmedabad, where the number of officers trained were only 26 (22 percent), 44 (31 percent) 52 (53 percent), 6 (9 percent) and 54 (56 percent).

*The Ministry stated that every effort and regular follow up action was made to complete the training at the earliest. The reasons for not fulfilling of targets and further steps required to be taken in this regard were, however, not furnished by them.*

(ii) *Wastage of slots*

It was agreed to impart training in 52 batches comprising 20-25 officials per batch. However, it was noticed that only 541 persons were trained in 41 batches averaging only 13 officials per batch and in nine batches the number of persons trained were only five to nine resulting in wastage of slots.

*The Ministry have accepted the observation stating that the Chief Commissioners of Income Tax have been directed at the highest level to ensure full attendance.*

**Training of  
ACITs/ITOs**

**(b)** The Board sanctioned Rs. 87.50 lakhs in August 1997, for training of approximately 5000 ACITs/ITOs in computer operations, with the stipulation that the training should be completed by December 1997. Audit scrutiny revealed as under:

*(i) Sub-letting of contracts*

Though the value of the tender aggregated to more than Rs. 87 lakh, no open tender system was adopted on the ground of urgency. The Department invited limited technical/commercial bids from three firms in August 1997, out of which only two firms submitted their bids. Although the rates of M/s. NIIT Ltd. was the lowest at Rs. 1600 per participant per batch for five days, the Department split the order between M/s NIIT Ltd. and M/s. TCS Ltd. after asking M/s TCS to match the rates of M/s NIIT. The work of training at Bangalore, Chennai, Hyderabad and Mumbai for 1648 officials was awarded to M/s TCS Ltd. and for training of 3224 officials at other stations to M/s. NIIT Ltd. in October 1997. However it was noticed that M/s. TCS Ltd. sublet the contract of training at all the cities to two other agencies in violation of the contract agreement. However, the Department did not take action against the firm for violating the contract conditions and instead made the entire payment of Rs. 21.94 lakh.

*The Ministry stated that the commercial bid included a condition that “if necessary, TCS may utilise faculty from reputed third party association to conduct the training. TCS would ensure that these programmes also meet their own stringent quality measures”.*

*However, it was noted that while placing the order, the Ministry had specifically mentioned that in no case, whatsoever, the contractor will be allowed to sub contract the job to any other party or to an individual in any manner or of any nature.*

*(ii) Non-fulfilment of targets*

Though the training was to be completed by December 1997, it was noticed that upto December 1997 only 1138 officials (23 percent) and upto March 1998, only 3577 (73 percent) could be trained and another 657 officials (13 percent) were imparted training during 1998-99 leaving 638 officials untrained till March 1999.

**Training of  
staff members**

**(c)** For training of officers and staff at Delhi, Mumbai, and Chennai in computer familiarisation course with reference to application system environment, the Ministry accorded approval for training of 3640 and 2980 officials in March 1996 and December 1997 respectively and Rs. 32.65 lakhs

and Rs. 29.80 lakhs were sanctioned for this purpose by the Board in March 1996 / December 1997. Audit scrutiny revealed as under:

(i) *Awarding of contract without inviting tenders*

The department awarded the contract in March 1996 to M/s TCS for training of 3640 officials at the rate of Rs. 4000 per day per batch on the basis of rates approved in September 1994 which was for development of application software and not for conducting computer familiarization trainings. In that tender, only 100 officials (20 Sr. Executives and 80 technical persons) were to be imparted training in the development of application software at a cost of Rs. 3.16 lakhs. Another order for training of additional 2980 officials costing Rs. 29.80 lakhs was also placed on to M/s. TCS in November 1997 at the same rates.

Thus training of 6620 officials costing Rs. 62.45 lakhs was awarded by the Department without inviting tenders/quotations and further the fact that the earlier training programme of M/s TCS covered a different aspect of computerisation was not brought to the notice of the Ministry/Board while obtaining the sanction.

*The Ministry stated that the above training was not limited to computer familiarisation only but it was for application software also and M/s.TCS was given the order at the rates that were lower than the rates obtained in subsequent tender finalised in 1998. It was further stated that the details of the training were brought to the notice of the competent authority.*

*The Ministry's reply comparing two different types of training programmes is not acceptable. The earlier training was imparted based on hardware contract of September 1994 and was for understanding the operation of application systems including design, maintenance and operations aspects for 19 weeks duration varying 1-4 weeks to different categories of 100 personnel only. The latter training programme, on the other hand, was for 6620 personnel comprising of 4 days duration of 20 participants each for computer awareness and familiarisation to handle application systems. The comparison in rates with latter training contract was thus, not proper.*

**Other topics of interest-**

**Delay in commissioning of Air Conditioners (ACs)**

**3.2.13.1** It was envisaged to procure ACs to provide proper air Conditioning and dust free atmosphere for smooth functioning of the PCs. The DIT (Systems) provided Rs. 1.78 crore to Mumbai Region for the purchase of ACs and computer furniture in March 1998. Out of this, Rs. 1.18 crore was utilised in March 1998 for the purchase of 445 ACs. However, the ACs installed in different buildings could not be commissioned for want of augmentation of power supply till January 1999.

In Calcutta centre, 209 ACs purchased in March 1998 at a cost of Rs. 55.45 lakhs were not commissioned till March 1999 due to shortage of power supplied through low tension transformer. It was further noticed that the

department in order to avoid lapse of budget grant, purchased additional 466 ACs at a cost of Rs. 126.19 lakhs in March 1999.

In Bangalore centre an amount of Rs. 42.42 lakhs was spent on purchase and installation of 139 ACs. However, due to shortage of power, only 28 ACs were operational (February 1999). In reply to an audit query as to how the PCs were functioning without ACs, the department stated that all the PCs supplied to the officers were functioning properly and that the PCs can function effectively without ACs. Thus the purchase of ACs at a cost of Rs. 42.42 lakh was not justified.

**Avoidable  
expenditure**

**3.2.13.2** It was noticed that CCIT, Delhi office purchased 426 ACs during March 1998 and 44 ACs in March 1999 having reverse valve heating facility in order to provide hot air inside the room during winter, at an additional cost of Rs. 18.58 lakh which may affect the functioning PC machines.

**Irregular  
withdrawal of  
Government  
money**

**3.2.13.3** As per Central Government Account Receipt and Payment Rules no money should be drawn from the Government Account unless it is required for immediate disbursement. It is not permissible to draw money from Government Account in anticipation of demands or to prevent the lapse of budget grant. Further, rush of expenditure at the fag end of financial years should be avoided.

Test check of the records revealed that the Department drew cheques in advance in respect of 23 cases amounting to Rs. 2462.76 lakhs. Further, test check of records of Shillong and Guwahati centres also revealed that the Directorate sanctioned funds amounting to Rs. 20.80 lakhs in March 1999 for other related purchases on computerisation during 1998-99. To avoid lapse of sanction, the amounts were shown as spent by drawing cheques against pro forma bills for installation of air conditioners and purchase of computer furniture. On this being pointed out by audit, it was stated that the amount for AC was sanctioned in anticipation of new PCs to be installed for which the DIT(S) had already placed orders in March 1998. However, till May/ June 1999 the PCs were not received and ACs and furniture had also not been delivered.

**Monitoring and  
Evaluation**

**3.2.14** Although the computerisation process was started during 1994, no independent evaluation study was conducted by the Department on their own or from any independent agency with a view to examine whether the intended benefits have been achieved with reference to the objectives.

**Conclusion**

**3.2.15** The computerisation programme which started in 1994 suffered from a lack of proper planning. None of the projected milestones could be achieved due to ad hoc changes made from time to time in the programme, an example of which was the decision to create the IPAN system. As a result even after six years computerisation is adhoc, incomplete and the sub systems are incompatible with the whole programme.

Against the conventional norms, the hardware was procured well before framing of the software design document, leading to improper hardware sizing. Further, bottlenecks such as non-readiness of sites/terminal banks, delay in the implementation of software application systems, and delayed acquisition of leased lines leading to non-connectivity of PCs with RCC/NCC contributed to an overall slowdown in the implementation of the computerisation programme.

Although the Ministry gave an undertaking to the Supreme Court of India in October 1997 that the process of computerisation including issue of PAN would be accelerated, nothing concrete was achieved till March 1999. While some progress was made in implementation of TAS and in PAN allotment, the progress in other areas like AIS, AST, IRLA, TDS, MIS, EIS and RMS etc. did not gather momentum despite the hardware and software facilities existing for this. Thus, the intended benefits have not accrued even after a period of five years and an expenditure of Rs. 104.55 crore.

*The Ministry replied that with a view to optimise the performance of applications and from the stand point of proper sizing as also capacity planning, a group comprising of representatives from TCS, IBM, Oracle and the department has been constituted to examine the issues in this regard.*