

LTE-TDD
 GSM IDR V5.2
 DWDM
 SCP HLR
 802.11n
 SMSC
 SDH ISDN IMS ISDN
 SMIIP CDMA enodeB
 SSP OLT MAX-XL TCP/IP
 NGN V5.2 CLI
RAX GPON MAX-XL GSM TDM MG
 ATM IVRS
 LTE-TDD
 LTE-A IDR TDM
 V5.2
 SCP CLI
 OSS/BSS
 SS7
 HLR IN
 SDH
 CDMA
 SDH
 SIP
 TCP/IP PSTN
 NMS
 SG-RAN
 WiFi

Annual Report
2010-11



Centre for Development of Telematics

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C-DOT Management

Governing Council

Chairman

Minister of Communications & IT

Vice-Chairman

Minister of State for Communications & IT

Members

Scientific Advisor to the Defence Minister

Chairman, Telecom Commission & Secretary (T)

Member (Technology), Telecom Commission

Member (Finance), Telecom Commission

Secretary, Department of Information Technology

Chairman & Managing Director, BSNL

Executive Director, C-DOT

Directors, C-DOT

Steering Committee

Chairman

Chairman, Telecom Commission & Secretary (T)

Vice-Chairman

Member (Technology), Telecom Commission

Members

Chairman & Managing Director, ITI Ltd.

Director (Planning), BSNL

Sr. DDG, Telecom Engineering Centre

DDG (TPF), Department of Telecommunications

Sr. Director, Department of Information Technology

Executive Director, C-DOT

Directors, C-DOT

Project Board

Chairman

Executive Director, C-DOT

Members

Directors, C-DOT

Overview

C-DOT, India's premier telecommunications R&D CENTRE, has been a pioneer and a nation builder. Committed to providing a wide range of cost-effective, indigenously developed and state-of-the-art total telecom solutions, it has come a long way since its inception 26 years ago.

C-DOT's contribution to the rural telecommunications scene in the country is well known. In the eighties, C-DOT developed rural telecommunication products ideally suited to Indian conditions. Able to work without air conditioning, the C-DOT Rural Automatic Exchanges (RAXs) acquired legendary status for their ruggedness and reliability. More switching products like SBM RAX for semi-urban and MAX-L (and later MAX-XL) for urban use followed. 6RU10, a radio product for rural applications was also developed. All these products were based on contemporary digital technology.

Starting from the single mission of providing a dial tone, C-DOT has grown, over the last 26 years, to the level of a national CENTRE for Research and Development in communication technology in many areas –Satellite communications, IN, ATM, DWDM, NMS, Wireless Broadband, GPON, NGN and Mobile Cellular systems. C-DOT's ATM technology has been mandated for use for onboard communication in

Indian Navy ships. The GPON is expected to play a lead role in bringing broadband pipes to rural India. The SG-RAN product, based on sharing of active GSM infrastructure, will bring affordable mobile telephony to the rural market. The MAX-NG will breathe fresh life into the fixed line infrastructure of the country by bringing new service features to POTS (Plain Old Telephony Service) together with VoIP and broadband access to C-DOT's MAX / RAX subscribers.

C-DOT has also been active in the area of providing telecom software solutions. C-DOT's umbrella NMS (Network Management System) solutions have made it possible to manage networks with elements from multiple vendors. The Data Clearing House (CLH) solution of C-DOT is commercially deployed for reconciling the roaming records between BSNL and MTNL and is holding its own against competitive pressures of the market.

C-DOT is also entrusted with the projects of national importance, like Central Monitoring System for telecom security and Secure Network for strategic applications.

The state-of-the-art R&D facilities at C-DOT's Delhi and Bangalore campuses are comparable with the best in the world.

- Trials of C-DOT's fixed-line network's migration to packet-based next generation network and broadband access

During the year, C-DOT's existing fixed-line exchanges, namely, MAX (Main Automatic Exchange) at Nuh (Haryana), Katpadi (Vellore, Tamil Nadu) and Vikas Nagar (Dehra Dun, Uttarakhand) were upgraded to MAX-NG (MAX with packet-based next generation technology) after successful completion of field-trial. At Vikas Nagar, MAX-NG migration was also carried out for fourteen AN-RAXes, three WLL (Wireless-in-Local-Loop) on V5.2 systems parented to C-DOT's MAX exchanges and one ISDN PRI.

C-DOT's NGN (Next Generation Network) solution with its MG and SG (Media Gateway and Signalling Gateway) sub-systems, installed at NOIDA, Bangalore, Kolkata, Chennai, Coimbatore, Hyderabad, Ahmedabad, Ernakulam, Jaipur, Nagpur, Bhopal and Lucknow, is being used by BSNL to provide commercial FTTH (Fibre-to-the-Home) services i.e. triple-play services to its subscribers with optical access at the customer premises. BSNL made available these triple play services on FTTH to seven cities, namely, Jaipur, Ahmedabad, Chennai, Hyderabad, Ernakulam, Coimbatore and Ajmer, on commercial basis. The total number of sites where FTTH services have been tested and made ready for commercial operations is more than 50 in number. Techno-commercial proposal was also submitted to BSNL for the absorption of FTTH project. BSNL has formed a price negotiation committee and discussions are in progress.

C-DOT completed field-trial, including TEC testing for technology approval, of IP Digital

Subscriber Line Access Multiplexer (IP-DSLAM) at Shillong. IP-DSLAM is used for providing broadband services to the subscribers over copper media. It is also planned to deploy IP-DSLAMs at MAX-NG field-trial sites.

Also in focus was the field-trial of broadband services over wireless media. It was completed for point-to-point broadband services over WiFi at Nuh and Ajmer. BSNL has plans to use C-DOT's NGN solution, installed at Noida, for offering voice and video services to its WiMAX subscribers on pan India basis.

- IMS-compliant fixed-line migration

The deliverables during the year include (i) implementation of functionalities of sub-systems, namely, IMS call session control and media resource/ control functions (ii) initiating integration and testing (iii) detailed design for IMS subscriber functions in Home Subscriber Server (HSS) (in progress).

- Implementation of GSM interfaces in C-DOT's Softswitch

Design is in progress for implementing GSM service interface in the IMS-compliant C-DOT Softswitch to provide support for CAP (CAMEL Application Part) and MAP (Mobile Application Part) protocols.

To provide IN services for MAX-NG subscribers, a software upgrade supporting fault tolerance with Freephone and UAN (Universal Access Number) has been implemented in the Softswitch, and is presently under validation.

Scheme: Rural technologies

The focus of the scheme has been to develop technologies which provide affordable rural communication facilities and give impetus to the economy. During the year 2010-2011, the focus of

technology development has been on the following deliverables:

- Shared GSM Radio Access Network (SG-RAN): to develop a RAN (Radio Access Network) allowing sharing of active infrastructure of a GSM-based cellular network,
- Voice-over-IP based rural broadband wireless access node,
- Enhanced Active Infrastructure Sharing (EAIS): Development of GSM Base Station System (BSS) for allowing spectrum sharing amongst GSM operators in an active shared BSS infrastructure.
- Data Rural Application Exchange (DRAX): Development of service blades for adaptation of various services and applications, like, e-Medicine, e-Education, e-Health, etc, to the network.

Following sub-sections discuss the progress achieved under each of the above deliverables.

- Shared GSM Radio Access Network (SG-RAN)

The technology development for the SG-RAN system has been completed and a system installed at Ernakulam, Kerala, for field-trials. Discussions are also going on with the manufacturers for transfer-of-technology.



- VoIP-based rural broadband access node

The technology for extended WiFi-based solution, namely, Voice-over-IP based rural broadband wireless access node,

has been enhanced with capabilities of repeater-mode operation, and cognitive radio to facilitate dynamic frequency allocation for efficient utilization of radio spectrum. The technology provides affordable broadband and end-to-end VoIP services in rural areas and can also be used for backhauling requirements. Field-trial is planned for the technology and a site has been identified for the purpose.

- Enhanced Active Infrastructure Sharing (EAIS)

In the year 2010-2011, development activity was undertaken for a GSM BSS that permits spectrum sharing amongst GSM operators in a shared active BSS infrastructure with interfaces to 3GPP-compliant MSC Server. During the year, design was started for PoC (Proof-of-Concept) realisation of IP-interfaces. However, due to emerging scenario, provisioning of GPRS functionality in SG-RAN system was assigned higher priority over the IP functionality. The software architecture design for GPRS functionality was taken up and PoC realisation for IP-interface was shifted for later realisation. Consequently, design activity for GPRS functionality in SG-RAN commenced.

- Data Rural Application Exchange (DRAX)

The project was undertaken during the FY 2010-2011 to build a prototype service blade to demonstrate the creation of new generation



services on WAN (Wide Area Network). The software architecture has been designed and prototype system has been made for demonstration and concept proving. Efforts are also ongoing for adding new services.

Scheme: Broadband technologies

The scheme aims at research and development on packet-based broadband technology for access and transport on various transmission media including optical, wireless and copper, and technologies for enhancing capacity and functionality of C-DOT's gigabit Routers to terabit-per-second capacities.

During the year, projects for development of Multi-port Optical Enterprise Solution (MOES) and enabling technologies for terabit Router were undertaken. The technology development efforts under MOES project was design and development for optical CPE (Customer Premises Equipment), multi-port terminal, and the terabit Router project focused on technology-feasibility study.

- Multi-port Optical Enterprise Solution (MOES)

MOES project was originally envisaged as development of two different types of CPEs— Optical Network Termination – 3 and 4 (ONT-3 and ONT-4) – having multiple types of interfaces, including 802.11n, for the user. A Multi-port Terminal (MT) has been developed to serve many



such CPEs to minimise network-side connectivity and for reducing field fibre usage. The interfaces supported towards the user would provide him triple-play services through a single fibre termination. System integration and testing have been completed for CPE and MT modules of MOES. These sub-systems are presently under validation.

- Broadband CPE with 3G wireless fallback

The project was undertaken during the FY 2010-2011 for developing a single Modem to support both wired and wireless modes for uninterrupted connectivity to the user. The progress made in the project includes finalisation of hardware design, and resolution of WiFi interface issues associated with the reference board. Necessary software development platform has also been procured and porting of 3G driver is in progress.

- Enabling technologies for Terabit Router

The growing number of broadband users and their ever increasing requirement of bandwidth means a much higher capacity backbone transport networks than those existing in the country. Further, with the convergence of services, namely, voice, data, video, mobility and broadband, packet switching has become the de-facto technology for building IP-based shared network infrastructures. In the backbone optical network, the core node's implementation becomes more complex due to applications becoming increasingly content and location dependent necessitating the routing decisions to be taken at very high speeds. This, in turn, means that a high capacity Router is a pivotal technology element in building very high-capacity IP-based communication networks for meeting the country's increasing bandwidth requirements in future.

The project entails identifying technologies, architecture and development for enhancing the capacity and functionality of C-DOT's gigabit Routers to terabit capacities.

During the year feasibility study and analysis were done for evolving the existing gigabit Router to terabit capacity. By the end of the year, experimental/ prototype implementations for terabit Router enabling technologies have been completed.

Scheme: Strategic and enterprise solutions

The scheme aims at development of (i) strategic solutions for the Defence sector and (ii) software intensive applications for enterprise solutions. These solutions will be an important source of revenue for C-DOT.

The efforts during the year have been towards enhancing the functionalities of commercially operational Data Clearing House (CLH) application, completing development of components of Secure and Dedicated Communication Network (SDCN), and design and development of a generic Customised Service Management Platform (CSMP) that can be used to develop EMS/ NMS solutions and also to integrate EMSs and NMSs of various telecom technologies namely, TDM, IP, optical, wireless etc. Following sections discuss the achievements made during the year in respect of the various deliverables under the scheme.

- Commercialisation of Data Clearing House (CLH) application

The Data Clearing House service, in commercial operation for GSM national roaming settlements of BSNL (North and East zones) and MTNL (Delhi and Mumbai), has been upgraded with the requirements that emerged during the Kumbh Mela, that is, to include national

roaming of subscribers of private operators, namely, Tata Tele Services Ltd. The same was executed commercially. To address another new commercial requirement that emerged for inter-circle roaming operation between MTNL Delhi and MTNL Mumbai, requisite set-up and internal testing have been completed. TADIG (Transferred Account Data Interchange Group) testing with MTNL is also expected to commence shortly. The development is also going on for NRTRDE (Near Real Time Roaming Data Exchange).

- Secure and Dedicated Communication Network (SDCN)

An IP-based dedicated secure network is planned to be set up in Delhi by MTNL, which will require C-DOT to deliver the network equipment and CPEs for VoIP service as also provide necessary support for setting up the core, access, and customer segments of the SDCN. During the year, the Softswitch and Digital Subscriber Line Access Multiplexer (DSLAM) have been installed at one site in Delhi for which the acceptance testing is expected to commence shortly. Also, the development of prototype plastic mould for secure VoIP CPE and demonstration of the basic functionality of secure VoIP CPE have been done. Softswitch installation activities at Disaster Recovery (DR) site in C-DOT have also been completed.

The project agreement with M/s MTNL has been signed and the equipment required for various other field sites is under procurement.

- Customised Service Management Platform (CSMP)

Study and analysis of requirements/scope for three major deliveries – Mediation framework, Application framework and Database framework, have been completed. The CSMP core components have also been identified and high

level architecture design is complete. Generic functional requirements have been defined for the above three major frameworks. Design and development are in progress.

In Mediation Framework, the software requirements have been defined and detailed design is in progress for various core mediation engine modules – Mediation function manager, Network Element interface manager with SNMP protocol and interface enabler.

Scheme: Enhancements/ new features/ upgradations/ adaptations/ technical support for developed technologies

This is an ongoing technology upgradation activity catering to component obsolescence, feature enhancements and adaptation for new interfaces, etc, to support the technologies that are deployed in the network or are undergoing field-trial. The technologies supported during the year in the field are:

- Enhancements of NMS activities, namely, TAX-NMS, GNMS, LNMS and SM. TAX-NMS, CDR-SM enhancements have been completed and it is planned to be commissioned on pan-India basis shortly. Other technologies supported in the field are CIIS, CLH applications, GPON technology field-trial, etc.
- An upgrade for the MAX technology related to MNP (Mobile Number Portability) changes has been released for implementation in the network.
- RAX at South-Central Railways has been upgraded to RAX-NG.
- IN (Intelligent Networks) deployments in MTNL network are undergoing technology upgradation. The SMP (Service Management Point) is being upgraded to newer technology solution at MTNL Delhi. There are plans to upgrade the SCP (Service Control Point) in near future.

- Design of the solution for ISP monitoring system for Gateways/ PoP (Point-of-Presence) locations of 10 major ISPs have been made and proposals submitted to respective ISPs. Around 40 monitoring systems of 1 Gbps/ 10 Gbps capacity have been installed.

Scheme: Basic research on telecom networks and enabling technologies/ study/pilot projects

During the year, the technology-exploration studies had been undertaken for feasibility study, prototype development/ demonstration and concept proving. These study projects include Dynamic Spectrum Allocation (DSA) and Optimised spectrum utilisation, LTE (Long Term Evolution) technology, One Number service PoC, etc. All the study projects have been completed, and concept-proving prototypes have been built and demonstrated.

Scheme: Campus

This is primarily a construction project for building residential complex including hostels in the existing premises. Getting statutory approvals on drawings submitted to MCD (Municipal Corporation of Delhi) is in process – clearance has been obtained from DDA (Delhi Development Authority) and MCD has forwarded the same to other agencies namely DUAC (Delhi Urban Art Commission) and DFS (Delhi Fire Services) for necessary approvals, and has requested the concerned agencies to expedite the process.

Scheme: C-DOT Alcatel-Lucent Research Centre (CARC)

It is a Cabinet approved Joint Venture program to conduct research and development in wireless broadband and supporting technologies. The activities carried out during the year include

support for the developed technology, and development of 3G Femtocell for Alcatel-Lucent, under contracted R&D services.

Business promotion activities

During the year, extensive effort was put towards the commercialization of C-DOT's technologies and support services – like, participation in the exhibitions, showcasing the technologies, bidding (singly or jointly) for tenders, EoI (Expression-of-Interest), signing NDAs and MoUs, etc. A summary of the accomplishments resulting out of these endeavors is as follows:

- ATM support: A 5-year term agreement for Rs 43.52 crores has been signed with BEL to provide requisite support for C-DOT's ATM technology adaptations in various Navy projects, namely, AISDN-17, SDN-15A, CAIO-17, CMS-P15A (1st, 2nd and 3rd ship); SDN-28, CMS-P28 (1st, 2nd, 3rd and 4th ship), and CMS-SNF (1st and 2nd ship).
- MTNL has agreed to renew the AMC, amounting to Rs 2.33 crores, for C-DOT's Intelligent Networks (IN) solution installed at MTNL Delhi and Mumbai. MTNL Delhi has also released the Purchase Order for Rs 19.50 lakhs for replacement of SMP. C-DOT has submitted a proposal to MTNL for SCP upgradation in C-DOT's IN systems installed at MTNL, for which, techno-commercial proposal has been submitted. MTNL has also evinced interest in the upgradation of installed SSPs.
- Commercial offer has been submitted to BSNL for the absorption of C-DOT's NGN solution deployed in their network as part of the field-trial. Several manufacturers have shown keen interest in the transfer-of-technology for NGN, MAX-NG, Routers and GPON systems – like, BEL Kotdwara, ITI Bangalore, UTL, Tejas Networks, Sai Info Systems, SM Creative, and signed pre-requisite NDAs (Non-Disclosure Agreements) with C-DOT, with respect to the technologies of their interest.
- For SDCN, a project agreement for Rs 19.64 crores has been signed with MTNL.
- Efforts have been made to expand the commercial operations of C-DOT's Data Clearing House applications for GSM national roaming to undertake BSNL's south and west zones in addition to currently ongoing services for BSNL (North and East zones and MTNL (Delhi and Mumbai), which generate an approximate revenue of Rs 3.5 crores annually. Discussions are going on with other service providers, namely, Idea Cellular and Vodafone, for providing services to intra-circle roaming for 3G subscribers (where the visitor's TSP (Telecom Service Provider) has not got the licence).
- DoT has authorised C-DOT as the co-ordinating agency for installation, commissioning and maintenance of ISP monitoring systems nationwide, on commercial basis. The ISPs are required to pay for the installation and support services.

Other Activities

Inauguration of GPON at Ajmer

BSNL's Fibre to the Home (FTTH) service, based on C-DOT's indigenously developed GPON technology, was launched in the city of Ajmer on 15th December 2010 by Shri Sachin Pilot, Hon'ble Minister of State for Communications and IT. A first for the indigenously developed GPON technology in the country, the service offers triple play, consisting of voice telephony, data (internet) and video to homes over a single optical fibre. The highlight of the function was a flawless live demonstration of the services offered by C-DOT GPON, be it a telephone call made to the Minister, the perfect playback of a streaming Youtube video (of Shri Sachin Pilot) or crystal clear TV channels. Another highlight was the live transmission of visuals of Dargah Sharif, the symbol of Ajmer, brought to the function by C-DOT's Broadband Wireless equipment (BBWT) and GPON, working in tandem.



Exhibitions & Conferences

To enhance brand visibility and to reach out to potential customers and collaborators, C-DOT has been participating in telecom exhibitions and conferences with renewed vigour and focus. C-DOT's stalls, with live demonstration of technology at work, unlike most other exhibitors, have drawn notice and high footfalls for being bigger, better and highly informative.



- C-DOT participated in the Conference & Exhibition "Communications India" held at Bangalore from 20th- 22nd May, 2010. The then Executive Director, C-DOT Mr. P. V. Acharya inaugurated the show. He and Mr. Vipin Tyagi, Director were also the Key Speakers at the Conference held in parallel.
- C-DOT participated in the Strategic Electronics Summit for Defence and Aerospace (SES 2010) held at IISc, Bangalore on 2nd July, 2010. Mr. Jayant Bhatnagar, Director gave a presentation on "Convergence in Strategic Networks" in the conference. Hon'ble MoS for Defence Mr. Pallam Raju visited C-DOT stall and appreciated its R&D efforts.
- As in previous years, C-DOT's participation in the International Conference & Exhibition "India Telecom 2010" was hugely successful. The event, held at Pragati Maidan, New Delhi from 9th-11th December, 2010, was organized by the Department of Telecommunications in association with FICCI. C-DOT participated in it in a big way. The theme of C-DOT stall was "Gaon-Gaon mein Broadband ke rang, C-DOT Takneek ke Sang". A live demo of teleophthalmology through C-DOT GPON was a huge hit. Specialists from Venu Eye Research Centre were present there with equipment and Doctor's end and patient's end were connected through GPON. Secretary (Telecom) and many other

senior officials and Telecom professionals visited the stall and evinced keen interest in the live display of GPON, NGN and wired / wireless Broadband equipment developed by C-DOT.

- C-DOT showcased its technological strength at the Convergence India 2011 held at Pragati Maidan from 24th-26th March, 2011. The exhibition was inaugurated by Hon'ble MoS-C&IT Mr. Sachin Pilot. Mr. Pilot visited C-DOT stall and appreciated the live demo of C-DOT technologies.

C-DOT showcased GPON, SG-RAN, NGN, NMS and BBWT effectively through live demonstrations. Situated at a prime location, C-DOT stall was the main attraction. A live Telecom Quiz show proved to be a crowd puller.

C-DOT was very well represented in the Seminar held in parallel to the exhibition. Mr. V. V. R. Sastry, EDR, C-DOT chaired a session on "3G & Beyond: The growth enablers", whereas Mr. Vipin Tyagi, Director, C-DOT spoke on "Rural Telecom Infrastructure - key to growth"

MoUs, Agreements and Contracts

MoUs and agreements are given in the table below:

| S. N. | TYPE | DATE OF SIGNING (dd/mm/yyyy) | PARTNER | PURPOSE |
|-------|-------------------|------------------------------|--|---|
| 1. | MoU | 22/06/2010 | USO Fund, Deptt. of Telecommunications | Demonstration of Multi-operator Shared BSS on Pilot Project basis |
| 2. | MoU | 12/11/2010 | Bharat Electronics Ltd. (BEL) | Participation in Indian Army RFI for ASCON Ph-IV Project |
| 3. | MoU | 18/11/2010 | Bharat Electronics Ltd. (BEL) | Participation in BSNL EOI for Unified NMS |
| 4. | Project Agreement | 01/10/2010 | Bharat Electronics Ltd. (BEL) | Co-operative projects using ATM and NIU technologies |
| 5. | Project Agreement | 30/02/2011 | MTNL, New Delhi | Rollout of SDCN Project |
| 6. | Project Agreement | 09/11/2010 | Communication Research Centre, Canada | Collaborative Development of WI-FI Broadband products |
| 7. | TOT | 15/03/2011 | SM Creative Electronics Ltd. | C-DOT G-PON System |

Patents

List of Patents Applications filed /in process during 2010-11

- Interoperability of Set Top Box through Smart Card
- Central Office Side redundancy scheme for FTTH-PON
- Provision For Unique MSISDN Number Across Multiple Subscriptions & Multiple Operators To A Single Mobile User
- A System And Method For Providing User With A GUI To Third Party Web Application

v. Interconnecting Optical Line terminals (OLT) to optimize the usage of Network resources

vi. A method for spectrum sharing in GSM-BSS

List of design Applications filed during 2010-11

i. Optical Network terminal- Type – I and II

Class: 14; Subclass: 02

ii. Cable stacker - Type I and II

Class: 14; Subclass: 02

iii. Secured VOIP phone – Type I and II

Class: 14; Subclass: 03

RTI Implementation

The setup in C-DOT for implementation of RTI Act 2005 consists of one First Appellate Authority (FAA), the Chief Public Information Officer (CPIO) and two Assistant Public Information Officers (APIO) – one for each location (Delhi and Bangalore).

During the year 2010-2011, seventeen (17) new requests for information were received. All of them were accepted and the information was provided for nineteen (19) cases, including two (2) outstanding cases, within the stipulated time-limit. Out of these, further appeal was made to the First Appellate Authority in three (3) cases. All the appeals were heard and decisions given.

Process Improvement in C-DOT

Organization's processes, related to management of projects that lead to product development and other technical activities, have already been defined and rolled-out. They continued to be in practice during this year. These processes relate to various stages of product development life-cycle, technical support, project management and process management activities – and are based on the CMMI framework.

The processes, along with the defined practices, guidelines and the process aids, were applied to all project activities – like planning and monitoring,

requirement analysis, design and implementation, validation, project reviews, configuration management and technical infrastructure support. These practices were complemented by quality reviews and periodic internal audits. The audits also focused on aspects like effort estimation during project planning, metrics collection and analysis, creation and maintenance of process repositories. The project monitoring reports and metrics analysis reports are utilized in taking project management decisions on subsequent activities of the projects.

A central process repository (accessible on intranet) stores the process definition, and the data sharable across projects, like, decisions taken, risks encountered, best practices, lessons learnt, etc. Analysis of various metrics collected from projects, and the resultant trend, is also being maintained in the repository.

For CMMI certification, a Spot Check for readiness and a Pre-Appraisal has been conducted this year by a certified external assessor for the projects based in C-DOT Bangalore. The final appraisals (SCAMPI-A) for projects based in C-DOT Delhi and Bangalore separately, are scheduled in the next financial year (2011-2012).

HR Initiatives in C-DOT

During the year 2010-11 there was no recruitment in C-DOT. However, C-DOT has taken new initiatives towards recognition of the efforts put in by its employees. Following new schemes have been instituted:

- Long Service Award: All employees who complete 25 years on 25th August, each year are honored with a Silver plaque along with a Certificate of Appreciation towards long service, by the Executive Director (Head of the Organization) on the C-DOT Annual Day Function.
- Exemplary Performance Award: In order to recognize and encourage performance of its employees, C-DOT has instituted Individual &

Group Level Awards for each financial year (beginning with 2011-12). The award carries Cash Award & a Citation. The awards are categorized as under:

Exemplary Performance

Exemplary Leadership

Best Support (Technical)

Best Support (Non-Technical)

Women Empowerment

C-DOT's Management has always been sensitive to gender issues and has consistently worked towards creating organizational culture reflecting gender equality. Presently, about 33 % of staff in C-DOT are women.

Existing Policies:

- All female staff members are allowed to avail up to 180 days maternity leaves for delivery and up to 270 days leaves subsequent to that (inclusive of 180 days maternity leave). For miscarriage/abortion, leave of a total of 45 days in the entire service is permissible.
- C-DOT offers accommodation and transport benefits to all its women employees with different options that maybe availed as per individual suitability. This ensures the safety and security of all women employees in the company.
- Reimbursement for residential telephone expenses is admissible to about 61 % of the women staff. Multifunctional allowance is admissible to 43 % of the women employees.
- Career growth opportunities for women are available to women employees in C-DOT. In the last financial year, of the total employees promoted to higher grades, 37% of them were women. In management cadres (Team Leaders, Group Leaders, Technical Experts and Sr. Technical Experts) about 24% are women.

- In order to address issues relating to Sexual Harassment of women staff at work place, a Committee has been constituted by C-DOT Board to take a fair and justified view of the cases and recommend suitable action on the same.

Employees' Welfare:

- For the purpose of coverage for hospitalization expenses, C-DOT has taken a Tailor-made group medi-claim insurance from Oriental Insurance Company Ltd. Staff members (and their families) in executive cadres have coverage of Rs. 5 Lakhs and staff in non-executive cadres have been covered for Rs. 3.5 Lakhs. The policy has been made effective from 1st April 2006.

Recruitment of SC/ST and persons with disabilities:

For recruitment of persons with disabilities and candidates belonging to SC/ST category, C-DOT follows government rules providing for reservation in jobs in C-DOT.

C-DOT has a system in place to look after the welfare of persons belonging to these categories and address any problems / complaints that may come up.

Benefits for persons with disabilities:

- C-DOT follows guidelines issued by Government of India with respect to reservations in jobs for persons with disabilities.
- The C-DOT Campus at Delhi has been constructed in such a manner so as to ensure barrier free environment for the persons with disabilities. The main entrance/exit can be approached through a ramp together with stepped entry. Even elevators connecting the various working areas have been installed in way to facilitate persons with disabilities to move around freely from one wing to another.

Promotion of Hindi in C-DOT

C-DOT is making serious efforts to ensure compliance to the Official Language Policy of Government of India. To create awareness among the employees, C-DOT organizes different programmes throughout the year. Many innovative programmes have been initiated at both Delhi and Bangalore CENTRES of C-DOT in this regard. Hindi workshops are held regularly on different topics of relevance.

In an endeavor to give new dimension to the mundane and monotonous Hindi workshops, C-DOT started an interactive programme "Samvaad". Litterateurs of repute are invited for talks in this programme. Thus, it serves dual purpose of making the employees aware of the importance of the official language Hindi while entertaining them.

On one such occasion, distinguished author, critic and academician Dr. Namwar Singh gave his presentation on "Vaigyanik Sangathan aur Hindi". He shared his wisdom and experiences with C-DOTians, which inspired and motivated everyone.

Hindi Utsav 2010 was celebrated at C-DOT offices from September 1st-14th, 2010 (Bangalore) and September 14th-28th, 2010 (New Delhi). The Utsav began with Inse Miliye... featuring Indian Ambassador to Bhutan Dr. Pavan Varma, a thinker, author and poet of acclaim. He reiterated the importance of Indian culture and languages in the present day scenario. During the fortnight, many competitions and events were organized to motivate C-DOTians to do their day-to-day work in Hindi.



On the penultimate day of the Utsav, a drama by artistes from National School of Drama (NSD) was the main attraction. "Ayodhya Babu Sanak Gaye" was staged under direction of Devender Raj Ankur, former chairperson of NSD and an acclaimed theatre genius with a distinctive directorial style. The dramatic enactment of Umashanker Choudhry's story, depicting the life of a common man, by the well-established trio of Amitabh Srivastav, Harvinder Kaur and Ramji Bali was liked by one and all.

C-DOT was instrumental in successfully arranging the first meeting of the reconstituted Hindi Advisory Committee of the Department of Telecommunications in Bengaluru on 29th March, 2011. The then Minister of State for Communication and IT Shri Gurudas Kamat chaired the meeting. Hon'ble Member of Lok Sabha Shri Ashok Argal attended the meeting along with other non-official members namely, Dr. Krishna Kumar Goswami, Dr. T. R. Bhatt, Shri Darshan Singh, Shri Shiv Shankar Gupta, Shri Rajesh Kapoor "Raja" and Dr. Gajbhan Mukut Sharma. Ms. Sudha Shrotriya, Joint Secretary- Administration, DoT and Member Secretary to the Committee, conducted the meeting. Shri Jayant Bhatnagar, Director and Shri B. S. Chauhan, General Manager represented C-DOT in the meeting.

Grants and expenditure during 2010-2011

The grants in aid received during the financial year were Rs. 63.71 crores. The total expenditure on various schemes / projects up to 31st March 2011 is Rs. 127.97 crores.

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Report of the Auditors on the Accounts of C-DOT for the Year ended 31st March, 2011 and Management's Replies thereto

To: The Members of Centre for Development of Telematics (C-DOT)

| Sl.No. | Auditor's Observations | Management's Replies thereon |
|--------|---|---|
| 1. | <p>We have audited the attached Balance Sheet of the Centre for Development of Telematics, (hereinafter referred to as "C-DOT" OR "CENTRE") as at 31st March 2011 and the Income and expenditure Account for the year ended on that date annexed thereto. These financial statements are the responsibility of the Centre's Management. Our responsibility is to express an opinion on these financial statements based on our audit.</p> | <p>This observation is a factual one, as it reiterates the fact that the preparation of the Annual Financial Statements is the responsibility of the CENTRE and the auditors are required to merely express an opinion thereon, based upon their audit.</p> |
| 2. | <p>We have conducted our audit in accordance with auditing standards generally accepted in India. These standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by the management, as well as evaluating the overall financial statement presentation. We believe that our audit provides a reasonable basis for our opinion.</p> | <p>This is also a factual observation. Hence, no further comments are offered.</p> |

| Sl.No. | Auditor's Observations | Management's Replies thereon |
|--------|---|--|
| 3. | <p>Attention is drawn to the following observations:</p> <p>A. Fixed Assets</p> <p>The physical verification of Fixed Assets were initiated by the Centre during the year 2009-10 and the reconciliation of the same was carried out during the year in respect of Bangalore Unit. The Assets amounting to Rs. 3.94 Lakhs written down value were found short . No effect of the same has been given in the accounts. However, in the case of Delhi unit, the reconciliation between physical and financial records yet to be made to quantify the shortages and to that extend the assets were been over stated in both units.</p> | <p>Reconciliation of physical and financial records relating to fixed assets will be completed by 31.03.2012. Appropriate effects will be given therefor in the Accounts for the year 2012-13.</p> |
| | <p>B. Inventories</p> <p>i. Valuation of inventory by the CENTRE is at cost instead of at lower of cost or net realizable value thereof is not in accordance with Accounting Standard 2 prescribed by the Institute of Chartered Accountants of India (ICAI) {(Refer Para 5.0 of Schedule 15)}.</p> <p>ii. In view of the presence of slow/non moving components in the Inventory amounting Rs.151.24 lakhs as at 31.03.2011, we are unable to form an opinion as to the diminution in the value thereof.</p> | <p>B. Inventories</p> <p>i. The inventory included in these accounts represents inventory of stores and components.</p> <p>The guidelines of the expert committee on uniform format of Accounts for Central Autonomous Bodies, receiving grants-in-aid from the government, setup at the instance of the Parliamentary Committee on Papers, suggests valuation of inventory of stores and spares at "Cost".</p> <p>The centre has consistently valued the year end inventory of stores at "Cost".</p> <p>ii. The Management periodically takes action for the identification/disposal of slow & non-moving inventory of Stores and components.</p> |

| Sl.No. | Auditor's Observations | Management's Replies thereon |
|--------|------------------------|--|
| | | <p>The possible diminution in the value of such components due to storage/obsolescence due to change in technology etc, is accounted for only upon disposal of the Stores/components.</p> <p>This practice has been consistently followed.</p> <p>Kind attention is drawn to para 5(d) of Schedule 15-Significant Accounting Policies.</p> |

C. Investments and Loans

- i. No Provision has been made by the CENTRE for decline in value of investments of Rs 52 Crores in the Equity Shares of Joint Venture Company-M/s C-DOT Alcatel /Lucent Research Centre Private Limited- due to total erosion of its net worth {refer Note No.3.0(b) of Schedule 16}. As per para 3(b) of Schedule 16, as stated by the CENTRE, the Joint Venture has made operating profits during the year. However, no audited balance Sheet and Profit and Loss Account of the Joint Venture has been provided and made available to substantiate the same. No provision has been made for the erosion of the investment.

- ii. Further, the CENTRE has advanced Rs 18.46 Crores as advance to the Joint Venture in the year 2008-09. No interest has been received from the joint venture as per agreement. The CENTRE has not accounted or received any interest as per agreement from 2008-09 onwards till date. The amount not recognized during the year Rs 221.49 lakhs and totaling in aggregate till 31/3/2011 amounting Rs 411.46 lakhs.

C. Investments and Loans

- i. As revival of the fortunes of the Joint Venture company (CARC) was being contemplated earnestly by all concerned, C-DOT did not make any provision in its Accounts for the year on account of the erosion of the net worth of the JV company.

Though for the interest receivable by C-DOT on the loans given to the JV company was to have been accounted for under the accrual system of accounting being followed, the same was not accounted for as requests received from the JV company for the waiver of interest payable on the loans was under consideration.

However, subsequently, the request for waiver of interest was not acceded to. The JV company paid the total interest payable upto 31.03.2011, in the year 2011-12.

| Sl.No. | Auditor's Observations | Management's Replies thereon |
|--------|---|---|
| | <p>However, the joint Venture has provided the interest in their accounts and TDS of Rs 22.15 lakhs. Even TDS of Rs 22.15 lakhs during the year has not been accounted as receivable in the books of the Center.</p> <p>Also, TDS amount deducted by the various other constituents amounting to Rs 65.25 lakhs has not been shown as recoverable in Balance Sheet and no corresponding Income Booked.</p> | <p>While making the Accounts for 2011-12, the interest receivable on the loans to the JV company for the year will be accounted for.</p> |
| | <p>D. Sundry Debtors</p> <p>As per para II(3) of Schedule 16, out of Rs 848.28 lakhs, an amount of Rs 658.90 lakhs due from M/S HTL. The certainty of recovery of this amount is based on the excess of sale price of the land over their banks liability. No Provision has been made during the year.</p> <p>Further, the balance amount of Rs 189.37 lakhs due from M/s Puncom Ltd. The CENTRE is contemplating legal action for the recovery of the above amount for which no provision has been made in the books.</p> | <p>D. Sundry Debtors</p> <p>As these two licencees have given adequate indications of payment of dues, while acknowledging the amounts due, no Provision has been made in respect of the above two amounts in these Accounts.</p> |
| | <p>E. Claims Recoverable</p> <p>Reference is invited to Schedule 7 under Claims Recoverable, totaling Rs 2372.18 lakhs, the sum amounting to Rs 1878.41 lakhs is due for more than 3 years and no confirmation or recoveries have been made. Further, no provision is also made in this account.</p> | <p>E. Claims Recoverable</p> <p>The amount of Rs 1878.41 lakhs represents the balance due from a Public Sector Telecom Operator on account of a Project undertaken by this Centre for the former. As per the policy followed consistently, these are considered good for recovery. Hence, no provision in respect thereof has been made in these accounts.</p> |

| Sl.No. | Auditor's Observations | Management's Replies thereon |
|--------|---|---|
| | <p>F. Profit & Loss Account</p> | <p>F. Profit & Loss Account</p> |
| | <p>(i) Employee Benefits</p> | <p>(i) Employee Benefits</p> |
| | <p>The CENTRE has followed during the year AS15(Revised) for Gratuity Valuation and an amount of Rs 290.19 lakhs has been provided during the year. The accumulated Gratuity upto 31-3-2011 is Rs 1822.80 lakhs. However, no provision for leave encashment has been made as per AS15 {Refer para 6.0(a) of Schedule 16}.</p> <p>The amount on account of leave Encashment not provided for the year Rs 332.71 lakhs. The accumulated leave encashment not provided upto the year Rs 1822.71 lakhs as per Actuarial value.</p> | <p>These are factual statements. It may further be mentioned that:</p> <p>(a) the Centre , which used to follow the PAY-AS-YOU-GO method for employee benefits upto the year 2008-09, adopted the Actuarial system thereafter. While the available resources with the Centre enable the recognition of the Liability for Gratuity in the Accounts on the Actuarial basis, the liability on account of Leave encashment will be recognized on a similar basis in future years, subject to availability of matching resources.</p> |
| | <p>(ii) Income Recognition</p> | <p>(ii) Income Recognition</p> |
| | <p>Reference is invited to para 15 to Schedule 15, CENTRE has not accounted for Income to the extent of Rs 6.52 Crores on the accrual basis as per accounting Policy. As per the CENTRE , the reason for not accounting this income is due to non-correlation of the services rendered by the CENTRE to the service receivers. Hence, it seems no internal control and check exist to know the exact amount of billing to be made to various clients for the services rendered. The centre seems to depend upon the various constituents and clients for the income to be accounted for in their books of accounts.</p> | <p>The amount indicated is apparently based upon the statement for taxes shown to have been deducted at source from payments due to this CENTRE by various service receivers.</p> <p>All these amounts were shown as credited during Financial Year 2011-12, even though they have not been received by the CENTRE.</p> <p>As the law relating to taxation of services undergoes a paradigm shift during the Financial Year 2011-12, with the introduction of the point of taxation principle, the amounts indicated by the auditors need to be appropriately reconciled with the gross amount of income, the years to which they pertain and other relevant particulars, before being accounted for.</p> |
| | | <p>It was for the above reason that the income, if any, based on these credits for taxes, was not accounted for in these accounts.</p> |

| Sl.No. | Auditor's Observations | Management's Replies thereon |
|---|--|---|
| | <p>(iii) Income Tax Liability</p> <p>The Income Tax Department has denied the benefit of exemption 35(1)(ii) read with Section 10(21) of the Income Tax Act 1961, to the centre. However, the centre case is pending with the ITAT, New Delhi. Refer Note to Accounts (5)(c)</p> | <p>It is not correct to observe that the CENTRE does not have internal checks for accounting for income; for the services rendered to each licensee / service receiver is based upon formal agreements, MoU's, which stipulate specific milestones to be achieved for receipt of income.</p> <p>(iii) Income Tax Liability</p> <p>As observed by the auditors, the Income Tax Authorities, have denied the benefit of tax exemption, available to Scientific Research Associations, in the case of the CENTRE.</p> <p>On being aggrieved, the CENTRE has filed appeals before the Income Tax Appellate Tribunal (ITAT) seeking appropriate reliefs.</p> |
| <p>4. Subject to the matters stated in paragraph 3 above, we report that:</p> <p>i. We have obtained all the information and explanations which, to the best of our knowledge and belief, were necessary for the purposes of our audit.</p> <p>ii. In our opinion, proper books of account as required by law, have been kept by the CENTRE so far as appears from our examination of the books.</p> <p>iii. The Balance Sheet and Income and Expenditure Account are in agreement with the books of account.</p> | | <p>i. The CENTRE has furnished all the information required by them.</p> <p>ii. In their opinion, proper books of account have been maintained by C-DOT.</p> <p>iii. The said books of accounts maintained by C-DOT are in agreement with the financial statements for the year.</p> |

| Sl.No. | Auditor's Observations | Management's Replies thereon |
|--------|---|--|
| | <p>iv. In our opinion and to the best of our information and according to the explanations given to us, the said accounts, read to together with the notes and accounting policies thereon, give the information in the manner so required and give a true and fair view, in conformity with the accounting principles generally accepted in India:-</p> <p>a. In the case of the Balance Sheet, of the state of affairs of the CENTRE as to 31st March 2011; and</p> <p>b. In the case of the Income & Expenditure Account, of the excess of expenditure over income for the year ended on that date.</p> | <p>iv. This comment is self explanatory and requires no further observation.</p> |

For M/s. Rajendra K. Goel & Co.
Chartered Accountants
(Firm Registration No. 001457N)
Sd/-
(V.K Issar)
Partner
M. No. 9519

Place: New Delhi
Date: 30.06.2011

For Centre for Development of Telematics

Sd/-
(V.V.R. Sastry)
Executive Director

Place: New Delhi

Balance Sheet as at 31st March...

(In Rupees)

| | Schedule No. | 2011 | 2010 |
|---|--------------|------------------|------------------|
| CORPUS / CAPITAL FUND AND LIABILITIES | | | |
| Corpus/Capital Fund | 1 | 3,141,358,097.14 | 3,514,164,657.72 |
| Reserves & Surplus | 2 | 23,658,685.67 | 23,658,685.67 |
| Current Liabilities & Provisions | 3 | 362,765,671.06 | 339,410,387.49 |
| TOTAL | | 3,527,782,453.87 | 3,877,233,730.88 |
| ASSETS | | | |
| Fixed Assets | 4 | | |
| Gross Block | | 4,652,641,574.93 | 4,573,728,680.61 |
| Less :- Depreciation | | 3,460,202,775.16 | 3,286,559,965.09 |
| Net block | | 1,192,438,799.77 | 1,287,168,715.52 |
| Assets in transit | 4 | 814,578.56 | 83,539.00 |
| Capital Work in Progress | 5 | 4,459,882.00 | 4,459,882.00 |
| Investments-Long Term | 6 | 520,000,000.00 | 520,000,000.00 |
| Current Assets, Loans & Advances and Deposits | 7 | 1,810,069,193.54 | 2,065,521,594.36 |
| TOTAL | | 3,527,782,453.87 | 3,877,233,730.88 |
| Significant Accounting Policies | 15 | | |
| Notes on Accounts | 16 | | |

Schedules 1 to 7 , 15 and 16 form an integral part of the Balance Sheet

For and on behalf of the
Centre for Development of Telematics

Sd/-
P. Venkatesan
Chief Finance Officer

Sd/-
V.V.R.Sastry
Executive Director

In terms of our report of even date attached
For M/S Rajendra.K.Goel & Co
Chartered Accountants
Firm Regn. no .001457N

Place: New Delhi
Date: 30.06.2011

Sd/-
V.K. Issar
Partner
M.No. 9519

Income and Expenditure Account for the year ended 31st March...

(In Rupees)

| | Schedule No. | 2011 | 2010 |
|---|--------------|-------------------|-------------------|
| INCOME | | | |
| TOT, Royalty, FSR and Publications | 8 | 327,037,743.00 | 257,500,755.85 |
| Interest Earned | 9 | 14,128,037.29 | 10,826,455.43 |
| Other Income | 10 | 13,579,160.65 | 3,807,866.78 |
| TOTAL(A) | | 354,744,940.94 | 272,135,078.06 |
| EXPENDITURE | | | |
| Establishment Expenses | 11 | 764,626,325.50 | 683,873,605.23 |
| Operational Expenses | 12 | 220,340,236.23 | 137,285,265.45 |
| Other Administrative Expenses | 13 | 199,729,545.09 | 154,551,840.35 |
| Depreciation | 4 | 186,919,110.60 | 196,242,455.36 |
| TOTAL(B) | | 1,371,615,217.42 | 1,171,953,166.39 |
| Excess of expenditure over income for the year C=(B-A) | | 1,016,870,276.48 | 899,818,088.33 |
| Add/less(-) :- Adjustments pertaining to earlier years | 14 | -6,963,715.90 | 561,096.39 |
| Balance being excess of expenditure over income | | 1,009,906,560.58 | 900,379,184.72 |
| Add:- Excess expenditure over income of earlier years | | 11,051,188,504.40 | 10,150,809,319.68 |
| Balance being deficit carried to Corpus Fund/Capital Fund | | 12,061,095,064.98 | 11,051,188,504.40 |
| Significant Accounting Policies | 15 | | |
| Notes on Accounts. | 16 | | |

Schedules 4,8 to16 form an integral part of the Income and Expenditure Account

For and on behalf of the
Centre for Development of TelematicsSd/-
P. Venkatesan
Chief Finance OfficerSd/-
V.V.R.Sastry
Executive DirectorIn terms of our report of even date attached
For M/S Rajendra.K. Goel & Co
Chartered Accountants
Firm Regn . No 001457NPlace: New Delhi
Date: 30.06.2011Sd/-
V.K. Issar
Partner
M.No. 9519

Schedule - 1

Corpus / Capital Fund

(Forming part of the Balance Sheet as at 31st March...)

(In Rupees)

| | 2011 | | 2010 | |
|---|-----------------------|-------------------------|-------------------------|-------------------------|
| Grants from Dept. of Electronics (Presently Dept of Information Technology) Accumulated balance | 335,200,000.00 | | 335,200,000.00 | |
| Grants from Dept. of Telecommunication Balance at the beginning of the year | 14,230,153,162.12 | | 13,230,153,162.12 | |
| Add:- Contributions towards Corpus/Capital Fund during the year | <u>637,100,000.00</u> | 15,202,453,162.12 | <u>1,000,000,000.00</u> | 14,565,353,162.12 |
| Less:- Balance of net expenditure transferred from the Income and Expenditure Account | | 12,061,095,064.98 | | 11,051,188,504.40 |
| TOTAL | | 3,141,358,097.14 | | 3,514,164,657.72 |

Schedule 2

Reserves & Surplus

(Forming part of the Balance Sheet as at 31st March...)

(In Rupees)

| | 2011 | | 2010 | |
|--|-----------------|---------------|---------------|---------------|
| | General Reserve | | | |
| Balance at the beginning of the year | 23,658,685.67 | | 23,658,685.67 | |
| Less: Provisions withdrawn during the year | <u>0.00</u> | 23,658,685.67 | <u>0.00</u> | 23,658,685.67 |
| TOTAL | | 23,658,685.67 | | 23,658,685.67 |

Schedule 3

Current Liabilities & Provisions

(Forming part of the Balance Sheet as at 31st March...)

(In Rupees)

| | 2011 | | 2010 | |
|--------------------------------------|----------------------|----------------------|----------------------|----------------------|
| CURRENT LIABILITIES | | | | |
| 1. Sundry Creditors | | | | |
| a) For Goods | 18,528,897.12 | | 8,140,078.45 | |
| b) Others | <u>58,386,418.00</u> | 76,915,315.12 | <u>58,005,913.00</u> | 66,145,991.45 |
| 2. Advances received | | | | |
| - For Funded Projects | | 13,016,273.60 | | 11,766,273.60 |
| 3. Statutory Liabilities | | 17,105,633.00 | | 15,700,876.00 |
| 4. Other Current Liabilities | | <u>70,956,375.34</u> | | <u>86,816,540.44</u> |
| Sub-total(A) | | 177,993,597.06 | | 180,429,681.49 |
| PROVISIONS | | | | |
| 1. Gratuity | 182,280,315.00 | | 155,924,448.00 | |
| 2. 6th Pay Commission salary arrears | <u>2,491,759.00</u> | | <u>3,056,258.00</u> | |
| Sub-total(B) | | 184,772,074.00 | | 158,980,706.00 |
| TOTAL(A+B) | | 362,765,671.06 | | 339,410,387.49 |

Schedule 4

Fixed Assets

(Forming part of the Balance Sheet as at 31st March 2011)

(In Rupees)

| | Gross Block | | | Depreciation | | | Net Block | | |
|--------------------------------|------------------|----------------|-----------------|------------------|------------------|----------------|-----------------|------------------|------------------|
| | As on 01.04.2010 | Additions | Adj./Write-off | As on 31.03.2011 | As on 01.04.2010 | For the year | Adj./Write-off | As on 31.03.2011 | As on 31.03.2010 |
| Land -Free Hold | 120,000,000.00 | 0.00 | 0.00 | 120,000,000.00 | 0.00 | 0.00 | 0.00 | 120,000,000.00 | 120,000,000.00 |
| Building-Office | 570,180,967.65 | 0.00 | 0.00 | 570,180,967.65 | 231,523,862.67 | 33,865,710.50 | 0.00 | 304,791,394.48 | 338,657,104.98 |
| Building-Residential | 23,627,434.00 | 0.00 | 0.00 | 23,627,434.00 | 11,978,333.23 | 582,455.04 | 0.00 | 11,066,645.73 | 11,649,100.77 |
| R & D Equipment | 2,512,691,801.79 | 49,390,399.01 | (13,149,932.76) | 2,548,932,268.04 | 1,976,679,592.46 | 87,571,119.99 | (11,554,791.03) | 496,236,346.62 | 536,012,209.33 |
| R & D Computers | 692,329,199.80 | 32,643,059.04 | (10,995.47) | 724,961,263.37 | 676,378,578.71 | 29,156,208.05 | (10,995.43) | 19,437,472.04 | 15,950,621.09 |
| Office Equipments & Appliances | 348,902,349.49 | 3,177,019.44 | (1,064,912.19) | 351,014,456.74 | 215,750,150.57 | 20,439,362.18 | (998,108.40) | 115,823,052.39 | 133,152,198.92 |
| Furniture & Fixtures | 262,715,982.52 | 7,501,795.90 | (978,023.65) | 269,239,754.77 | 130,968,502.09 | 13,898,209.84 | (710,845.67) | 125,083,888.51 | 131,747,480.43 |
| Library Books | 43,280,945.36 | 1,406,045.00 | (1,560.00) | 44,685,430.36 | 43,280,945.36 | 1,406,045.00 | (1,560.00) | 0.00 | 0.00 |
| Total | 4,573,728,680.61 | 94,118,318.39 | (15,205,424.07) | 4,652,641,574.93 | 3,286,559,965.09 | 186,919,110.60 | (13,276,300.53) | 1,192,438,799.77 | 1,287,168,715.52 |
| Assets in transit | | | | | | | | 814,578.56 | 83,539.00 |
| Previous year's total | 4,467,277,724.24 | 108,001,182.11 | (1,550,225.74) | 4,573,728,680.61 | 3,091,698,149.12 | 196,242,455.36 | (1,380,639.39) | 1,287,168,715.52 | 1,375,579,575.12 |

Schedule 5

Capital Work in Progress

(Forming part of the Balance Sheet as at 31st March'2011)

(In Rupees)

| | As at 01.04.2010 | Additions | Transfer to Fixed Assets | As at 31.03.2011 |
|-------------------------------|---------------------|------------|-----------------------------|---------------------|
| Campus -Delhi | | | | |
| 1) Campus-Residential Complex | 4,459,882.00 | 0.00 | 0.00 | 4,459,882.00 |
| Total | 4,459,882.00 | 0.00 | 0.00 | 4,459,882.00 |
| Previous Year Balance | 3,841,977.00 | 638,210.00 | (20,305.00) | 4,459,882.00 |

Schedule 6

Investments - Long Term

(Forming part of the Balance Sheet as at 31st March...)

(In Rupees)

| | No. of Fully Paid Equity Shares | Face Value Per Share (Rs.) | 2011 | 2010 |
|---|---------------------------------------|----------------------------------|----------------|----------------|
| UNQUOTED (At Cost) | | | | |
| JOINT VENTURE COMPANY | | | | |
| 1. C-DOT Alcatel Lucent Research Centre Pvt. Ltd. (CARC) | 52,000,000 | 10 | 520,000,000.00 | 520,000,000.00 |
| TOTAL | | | 520,000,000.00 | 520,000,000.00 |

Schedule 7

Current Assets, Loans & Advances and Deposits

(Forming part of the Balance Sheet as at 31st March...)

(In Rupees)

| | 2011 | | 2010 | |
|--|-----------------------|-----------------------|-----------------------|-----------------------|
| A. CURRENT ASSETS | | | | |
| 1 Inventories (As taken, valued and certified by the Management) | | | | |
| a) Inventory | 119,850,220.91 | | 143,212,357.58 | |
| b) Inventory in transit | <u>8,325,144.51</u> | 128,175,365.42 | <u>909,702.30</u> | 144,122,059.88 |
| 2 Sundry Debtors | | | | |
| a) Debts outstanding for a period exceeding six months | 362,894,063.00 | | 922,153,464.00 | |
| b) Others | <u>81,999,500.00</u> | | <u>165,961,436.00</u> | |
| | 444,893,563.00 | | 1,088,114,900.00 | |
| Less:-Provision for Bad & Doubtful Sundry Debtors | <u>50,053,067.00</u> | 394,840,496.00 | <u>0.00</u> | 1,088,114,900.00 |
| 3 Bank Balances - | | | | |
| With Scheduled banks | | | | |
| a) On Deposit Accounts | 426,285,207.41 | | 79,767,117.00 | |
| b) On Saving Accounts | <u>183,890,099.28</u> | <u>610,175,306.69</u> | <u>255,646,575.09</u> | <u>335,413,692.09</u> |
| TOTAL (A) | | 1,133,191,168.11 | | 1,567,650,651.97 |
| B. LOANS & ADVANCES | | | | |
| 1 Loans | | | | |
| a) Staff | 2,973,199.00 | | 1,260,148.00 | |
| b) CARC Pvt Ltd | <u>184,578,500.00</u> | 187,551,699.00 | <u>184,578,500.00</u> | 185,838,648.00 |
| 2 Advances and other amounts recoverable in Cash or in kind or for value to be received. | | | | |
| a) Contractors & Suppliers | 21,080,297.22 | | 4,206,909.24 | |
| b) Employees | 1,699,748.00 | | 2,951,056.00 | |
| c) Prepaid expenses | <u>10,409,230.25</u> | 33,189,275.47 | <u>11,517,603.76</u> | 18,675,569.00 |
| 3 Interest Accrued | | | | |
| a) On Staff Loan | 260,323.45 | | 255,528.00 | |
| b) On Bank Deposits | 2,741,600.70 | | 367,121.00 | |
| c) CARC Loan | <u>7,976,403.00</u> | 10,978,327.15 | <u>10,390,079.00</u> | 11,012,728.00 |
| 4 Claims Recoverable | | 237,218,062.59 | | 197,841,104.35 |
| 5 Tax Deducted at Source | | 124,303,629.44 | | 55,733,775.00 |
| 6 Disputed Income tax | | 77,554,580.31 | | 11,031,283.00 |
| 7 Centvat credit receivable | | <u>1,492,818.47</u> | | <u>11,718,603.04</u> |
| TOTAL (B) | | 672,288,392.43 | | 491,851,710.39 |
| C. DEPOSITS | | | | |
| a) Office Building | 40,500.00 | | 40,500.00 | |
| b) Others | <u>4,549,133.00</u> | | <u>5,978,732.00</u> | |
| TOTAL (C) | | 4,589,633.00 | | 6,019,232.00 |
| TOTAL (A)+(B)+(C) | | 1,810,069,193.54 | | 2,065,521,594.36 |

Schedule 8

Income from TOT, Royalty, FSR and Publications

(Forming part of Income & Expenditure Account for the year ended 31st March...)

(In Rupees)

| | 2011 | | 2010 | |
|---|------------------|-----------------------|-------------------|-----------------------|
| 1) Income from Royalty | | | | |
| - Received in Cash | 12,500,000.00 | | 0.00 | |
| - Accounted on accrual basis | <u>0.00</u> | 12,500,000.00 | <u>0.00</u> | 0.00 |
| 2) Income from Transfer of Technology (TOT) | | | | |
| - Received in Cash | 800,000.00 | | 5,405,075.85 | |
| - Accounted on accrual basis | <u>0.00</u> | 800,000.00 | <u>0.00</u> | 5,405,075.85 |
| 3) Field Support Receipts (FSR) | | 313,689,743.00 | | 251,915,180.00 |
| 4) Income from Publications | | | | |
| - Campus-On Sale of Tender/ Technical documents | 3,000.00 | | 0.00 | |
| - Others | <u>45,000.00</u> | 48,000.00 | <u>180,500.00</u> | 180,500.00 |
| TOTAL | | 327,037,743.00 | | 257,500,755.85 |

Schedule 9

Interest Earned

(Forming part of Income & Expenditure Account for the year ended 31st March...)

(In Rupees)

| | 2011 | 2010 |
|---|----------------------|----------------------|
| 1) On Term deposits with Scheduled Banks | 9,176,437.21 | 4,717,889.07 |
| 2) On Saving Account with Scheduled Banks | 3,848,849.63 | 2,970,271.36 |
| 3) On Loans to Employees/Staff | 252,657.45 | 155,211.00 |
| 4) Others | 850,093.00 | 2,983,084.00 |
| TOTAL | 14,128,037.29 | 10,826,455.43 |

Schedule 10

Other Income

(Forming part of Income & Expenditure Account for the year ended 31st March...)

(In Rupees)

| | 2011 | 2010 |
|---|----------------------|---------------------|
| 1) Profit on Sale/disposal of Assets | 4,968.00 | 2,653.00 |
| 2) Miscellaneous Income | 13,426,306.45 | 3,544,248.29 |
| 3) Gain due to foreign exchange translation | 147,886.20 | 260,965.49 |
| TOTAL | 13,579,160.65 | 3,807,866.78 |

Schedule 11

Establishment Expenses

(Forming part of Income & Expenditure Account for the year ended 31st March...)

(In Rupees)

| | 2011 | 2010 |
|--|-----------------------|-----------------------|
| a) Salaries and Wages | 525,153,821.00 | 463,787,579.00 |
| b) Bonus | 866,954.00 | 863,500.00 |
| c) Contributions to Provident Fund | 47,299,508.00 | 40,882,599.00 |
| d) Contributions to other Funds | 5,403,390.00 | 5,385,906.00 |
| e) Gratuity provided for employees | 29,018,570.00 | 33,561,063.00 |
| f) Staff Welfare expenses | 135,797,287.50 | 114,007,655.23 |
| g) Rent on residentials and Maintenance Expenses | 17,784,403.00 | 21,655,051.00 |
| h) Recruitment and Training Expenses | 3,302,392.00 | 3,730,252.00 |
| TOTAL | 764,626,325.50 | 683,873,605.23 |

Schedule 12

Operational Expenses

(Forming part of Income & Expenditure Account for the year ended 31st March...)

(In Rupees)

| | 2011 | 2010 |
|---|-----------------------|-----------------------|
| a) R &D Components & Consumables | 123,838,626.00 | 53,737,738.30 |
| b) Freight & Forwarding Charges | 8,723,237.36 | 3,847,748.00 |
| c) Repair & Maintenance-R&D & Office Equipments | 64,719,417.87 | 76,024,575.15 |
| d) Design & Development Expenses | 894,001.00 | 1,865,065.00 |
| e) Consultancy Expenses | 22,000,139.00 | 968,085.00 |
| f) Testing Charges | 164,815.00 | 842,054.00 |
| TOTAL | 220,340,236.23 | 137,285,265.45 |

Schedule 13

Other Administrative Expenses

(Forming part of Income & Expenditure Account for the year ended 31st March...)

(In Rupees)

| | 2011 | | 2010 | |
|--|-----------------|-----------------------|-----------------|-----------------------|
| a) Travelling and Conveyance expenses | | 16,781,704.75 | | 10,443,307.00 |
| b) Vehicle hire charges | | 1,379,941.00 | | 1,174,134.00 |
| c) Rent, Rates & Taxes | | 2,040,113.00 | | 1,801,657.00 |
| d) Interest/Penalty Paid | | 0.00 | | 3,551,195.00 |
| e) Electricity & Water Charges | | 55,955,328.00 | | 56,898,705.00 |
| f) Repairs & Maintenance-Others | | 29,160,024.00 | | 35,721,001.00 |
| g) Newspaper , Periodicals, Journals & CDs | | 6,895,415.00 | | 2,922,217.00 |
| h) Insurance Charges | | 484,438.00 | | 485,751.00 |
| i) Printing, Stationery, Photocopy & Admin Consumables | | 9,576,741.01 | | 9,496,117.21 |
| j) Postage, Telephone and Communication Charges. | | 12,125,361.23 | | 13,309,184.65 |
| k) Exhibition, Advertisement & Publicity Expenses | | 7,867,552.00 | | 14,498,807.70 |
| l) Expenses on Conference/Seminar/Membership Fees | | 2,047,246.85 | | 1,158,448.00 |
| m) Legal, Professional fees & Honorarium | | 2,674,007.00 | | 1,070,321.00 |
| n) Patent fees | | 793,177.00 | | 387,760.00 |
| o) Remuneration to Auditors | | | | |
| Audit Fees | 250,000.00 | | 250,000.00 | |
| Out of pocket expenses | 84,221.00 | | 11,018.00 | |
| In other capacities | <u>7,207.00</u> | 341,428.00 | <u>2,020.00</u> | 263,038.00 |
| p) Hospitality/Entertainment Expenses | | 74,480.50 | | 171,907.76 |
| q) Bank Charges | | 1,186,560.62 | | 683,109.10 |
| r) Loss due to foreign exchange translation | | 250,154.81 | | 101,653.58 |
| s) Miscellaneous Expenses. | | 42,805.32 | | 272,818.00 |
| t) Loss on sale of Assets | | 0.00 | | 140,708.35 |
| u) Provision for Bad & Doubtful Debts | | 50,053,067.00 | | 0.00 |
| TOTAL | | 199,729,545.09 | | 154,551,840.35 |

Schedule 14

Adjustments Pertaining to Earlier Years (Net)

(Forming part of Income & Expenditure Account for the year ended 31st March...)

(In Rupees)

| | 2011 | | 2010 | |
|------------------------------------|---------------|---------------|--------------|--------------|
| | Debit | Credit | Debit | Credit |
| INCOME | | | | |
| TOT, Royalty, FSR and Publications | 0.00 | 5,550,320.00 | 0.00 | 179,794.00 |
| Interest Earned | 0.00 | 3,152,208.00 | 0.00 | 0.00 |
| Other Income | 0.00 | 0.00 | 74,000.00 | 0.00 |
| EXPENDITURE | | | | |
| Establishment Expenses | 0.00 | 124,294.00 | 214,999.00 | 0.00 |
| Operational Expenses | 14,148,027.98 | 0.00 | 0.00 | 1,233,214.61 |
| Other Administrative Expenses | 981,692.65 | 0.00 | 1,685,106.00 | 0.00 |
| Depreciation | 0.00 | 13,266,614.53 | 0.00 | 0.00 |
| TOTAL | 15,129,720.63 | 22,093,436.53 | 1,974,105.00 | 1,413,008.61 |
| Net Debit/Credit | | 6,963,715.90 | 561,096.39 | |

Schedule 15

Significant Accounting Policies

(Forming part of the Accounts for the year ended 31st March 2011)

| Sl.No. | Policy Statement |
|--------|---|
| 1. | <p>General</p> <p>The financial statements for the year, comprising of the Balance Sheet, the Income & Expenditure Account, Schedules bearing the numbers 1 to 14, which are based upon the policies stated here under, are prepared following the “going concern” concept.</p> |
| 2. | <p>Fixed Assets Accounting</p> <ol style="list-style-type: none"> <li>a. These are stated at their historical costs. <li>b. Assets in the form of R&D Equipment etc., purchased during the year under arrangement like letters of credit etc., are accounted for as follows:- <ol style="list-style-type: none"> <li>i. Such assets received by the CENTRE and put to use on or before the Balance Sheet date are capitalized, depreciation at applicable rates provided thereon and provision for the liability for the gross value thereof is created in the accounts for the year. <li>ii. Such assets are disclosed under “Assets – in – Transit” in Schedule 4, where they were in transit on the Balance Sheet date and therefore could not be put to use on that date. In such cases, based upon the documents received from the suppliers thereof, provision for the liability for the gross value thereof is created in the accounts for the year. However no depreciation could be provided in such cases. <li>iii. In cases where such assets have neither been received on the Balance Sheet date nor the documents therefor, no effect is given in the accounts for the year in respect of the values of such assets. <li>c. The Management directs conduct of physical verification of Fixed Assets and their reconciliation with Financial records. Such exercises are undertaken at regular intervals, taking into account the nature /size of activities of the CENTRE. |
| 3. | <p>Accounting for Capital Work-in Progress</p> <ol style="list-style-type: none"> <li>a. Expenditure incurred on the R&D campuses and on facilities like housing therein is booked under this head. <li>b. Such expenditure continues to be disclosed distinctly until it is capitalized. |

| Sl.No. | Policy Statement |
|--------|---|
| 4. | <p>Depreciation on Assets</p> <p>a. For this purpose, the provisions of the applicable Rules of the Income Tax Rules 1962, (The Rules) as amended from time to time, are adopted, with the following exceptions:-</p> <ul style="list-style-type: none"> <li>i. Fixed Assets put to use during the year are depreciated at the full rates, provided by The Rules for the whole year, irrespective of the date of putting such assets to use. <li>ii. Fixed Assets, the individual cost of each of which is not more than Rs. 5000, the whole of such costs is charged to the Revenue in the year of acquisition itself. <li>iii. The cost of Library books purchased during the year are charged to revenue in the accounts of the year of acquisition. <li>iv. In respect of assets, that are sold, or discarded or disposed off during the year, no depreciation is provided in respect thereof. <li>v. In the case of assets in transit, explained in para 2 (b) ii above, no depreciation is provided in respect of the values thereof. <li>vi. In respect of computer software, the lower rate of depreciation, prescribed by The Rules for plant and machinery has been continued to be applied, in spite of the fact that the latest provisions of The Rules prescribed a lower rate of plant and machinery and higher rate for computer software. |
| 5. | <p>Inventory Valuation</p> <ul style="list-style-type: none"> <li>a. These are valued at "Cost". <li>b. The term "Cost" includes overheads, determined by the management from time to time. <li>c. The term "Cost" is determined by the moving weighted average method. <li>d. The inventory of 'Stores' at each Balance Sheet date may include the value of stores, which are slow moving. The effect of the diminution in their value, if any, due to their slow moving nature, is given only at the time of their disposal. |
| 6. | <p>Accounting for loans to employees</p> <ul style="list-style-type: none"> <li>a. Such loans are recovered in equal monthly installments not exceeding 40. <li>b. The principal amount of the loan is first recovered over the number of installments, not exceeding 40, agreed to by the employee. |

| Sl.No. | Policy Statement |
|--------|--|
| | <ul style="list-style-type: none">c. Interest accrued on the loans given to the employees on each intervening balance sheet date is assumed in the accounts.d. As the recovery of the principal amount of the loans to employees and the interest due thereon is made through monthly salaries of the employees concerned, these are assumed to be “confirmed” and accepted by the employees. No separate confirmation process is undertaken.e. The amounts due from employees who, after taking loans from the CENTRE, leave the services of the organization before full settlement, are recovered from the final settlement made to such employees. |
| 7. | <p>Accounting for Advances</p> <ul style="list-style-type: none">a. To employees<ul style="list-style-type: none">i. Advances to employees in relation to official travel / LTC / Miscellaneous Expenditure of the organization fall in this category.ii. Such advances do not bear any interest and are normally recovered within the time limits prescribed for each such type of advance.iii. The balance of such advance is also recovered from the employees through their monthly salaries.iv. Therefore, as in the case of “loans to employees” referred to in para 6(d) above, these advances are taken as confirmed and accepted by the concerned employees. No separate confirmation process is undertaken.b. To suppliers and contractors<ul style="list-style-type: none">i. Advances given under the relevant agreements with contractors for supplies and services fall in this category.ii. Similarly, payments made to suppliers / contractors under Purchase Orders etc. for supplies / services, through arrangements made through official bankers, also fall in this category.iii. Such advances are adjusted in the normal course and upon completion of supplies / rendering of services by the contractor / service provider. |
| 8. | <p>Accounting for Deposits given</p> <ul style="list-style-type: none">a. To landlords for residential accommodation leased by the CENTRE for staff |

| Sl.No. | Policy Statement |
|--------|--|
| | <ul style="list-style-type: none"> i. At Bangalore, advance of upto ten months rent is paid. This advance, not being recoverable during the lease period, is accounted under the head "Deposits", and shown as such till the lease comes to an end. ii. Such Deposits do not earn any interest as per prevailing practice. iii. In such cases, rent is also paid to the landlord, in addition to the deposits as above, which is accounted for as expenditure of the year. iv. On the other hand at Delhi, advance of upto three months rent is paid to the landlord at the beginning of the lease, but the same is treated as rent and no rent is paid for a period of three months from the commencement of the lease. Therefore, "Deposits" do not generally arise at Delhi. <p>b. Miscellaneous Deposits</p> <ul style="list-style-type: none"> i. Deposits made to public utilities like water, electricity and gas suppliers are booked under this category. ii. Such deposits are retained in the books as deposits until the services are continued to be used. |
| 9. | Accounting for Current Assets and Liabilities |
| | <p>a. Current Assets</p> <ul style="list-style-type: none"> i. Expenditure incurred by the CENTRE on projects undertaken by it for other agencies is shown under "Claims recoverable" and included under "Current Assets", until such balances are realised from the said agencies. ii. Fees for Transfer of technology (TOT) and Royalty on sale of products based on such technologies, fees for Field Support rendered by the CENTRE to the Telecom Operators and other income, which have been accounted for on accrual basis, are treated as part of "Sundry Debtors" and included under "Current Assets" until realization. iii. Balances due to the CENTRE, on account of the expenditure indicated in a(i) or the income indicated in a(ii) above, are treated as good for recovery, if the same are due from Govt. agencies and public sector organizations. <p>b. Current Liabilities</p> <ul style="list-style-type: none"> i. Advances received from Telecom Operators / other agencies for projects undertaken by the CENTRE on "Reimbursement Basis" are shown as "Advances received for funded projects" and shown in the schedule on "Current Liabilities and Provisions". |

| Sl.No. | Policy Statement |
|--------|--|
| 10. | <p>Investments</p> <ul style="list-style-type: none"><li>a. The aggregate of the contributions to the equity capital of another R&D company in the field of telecommunications, has been disclosed under this head.<li>b. These investments are considered "Long Term in Nature".<li>c. Such investments are shown in these financial statements at "Costs". |
| 11. | <p>Accounting for Outstanding Liabilities</p> <ul style="list-style-type: none"><li>a. Provision for the aggregate of the values of the goods / services received on the Balance Sheet date is made in these financial statements, even though such values remained unpaid on that date in spite of the bills having been received.<li>b. Similarly, provision is also made for the values of goods / services received during the year, even though the claims therefor in the form of bills etc. were not received on that date.<li>c. No provision is made in these financial statements in all other cases. |
| 12. | <p>Accounting for Components and Consumables purchased during the year</p> <ul style="list-style-type: none"><li>a. In such cases a policy similar to the one which is adopted in the case of fixed assets {{Please refer Para 2(b)(i) to (iii)}} |
| 13. | <p>Accounting for transactions involving foreign exchange</p> <ul style="list-style-type: none"><li>a. Income and Expenditure Account<ul style="list-style-type: none"><li>i. Transactions in foreign exchange having an impact on the income and expenditure for the year are converted into Indian currency and stated in these financial statements.<li>ii. For the purpose of conversion, the rates have exchanged prevailing on the respective dates of incidence of expenditure / receipt of income are adopted.<li>b. Receivables and Payables<ul style="list-style-type: none"><li>i. Transactions in foreign exchange having an impact on the receivable / payable accounts, forming part of the Balance Sheet, are also converted into Indian currency.<li>ii. For the purpose of such conversion, rate of exchange prevailing on the balance sheet date is adopted. |

| Sl.No. | Policy Statement |
|--------|--|
| 14. | <p>Accounting for Grants-in-aid from the Government of India</p> <ol style="list-style-type: none"> a. These are accounted for on the basis of the dates of the sanction memoranda therefor, irrespective of the actual dates of receipt of the grants. b. Grants-in-aid received from the Government has been consistently shown under "Corpus / Capital Funds" and included in the Liabilities Side of the Balance Sheet. |
| 15. | <p>Revenue Recognition</p> <ol style="list-style-type: none"> a. Income is accounted for on accrual basis. b. However, expenses are accounted for on accrual basis with the following exceptions:- <ol style="list-style-type: none"> i. Ex-gratia payments to the eligible employees of the CENTRE, as per applicable policy from time to time is treated as expenditure of the year, only when the policy for such payment to employees' at the corresponding levels in the Govt. of India, Department of Telecommunications, is known for the concerned year; and ii. Expenditure on account of leave encashed by the employees is accounted for in these financial statements only on incidence basis. iii. Gratuity payable to employees:- <ol style="list-style-type: none"> 1. In the case of the liability of the CENTRE on account of gratuity payable to employees, provision is made in these financial statements on basis of actuarial valuation. 2. The Actuarial valuation of this liability has been made by adopting the Projected Unit Credit Method. iv. Projects undertaken by the CENTRE for Telecom Operators:- <ol style="list-style-type: none"> 1. The expenses and the receipts in respect of such projects are netted. 2. The net result is taken as either expenditure or income, as the case may be, depending upon whether the receipts are less or more respectively. 3. The above accounting takes place only upon the completion of the mile stones related to such projects. v. Adjustments pertaining to earlier years <ol style="list-style-type: none"> 1. Both income and expenditure relating to past financial years are accounted for under this head. |

Sl.No.

Policy Statement

2. An adjustment is treated as pertaining to earlier years only when all the following conditions are simultaneously satisfied.
 1. The adjustment is the result of the clerical error.
 2. Such a clerical error is detected only in the current financial year.
 3. Such a clerical error relates to one or more past financial years and does not arise in respect of the current year; and
 4. The value of this clerical error exceeds Rs. 5000 in each case.
- vi. General:-
 1. Previous years figures have been regrouped or rearranged, wherever necessary.

Schedule 16

Notes on Accounts

(Forming part of the Accounts for the year ended 31st of March, 2011)

PART - A : Balance Sheet

1.0 Fixed Assets

- a. Land as at 31.03.2011 represents the 40 acres at New Delhi (as at 31.03.2010 - 40 acres at New Delhi) acquired in 1993 from a Government of India, Department of Telecom (DOT) undertaking, for valid consideration. This land, has been considered free hold, even though no formal conveyancing has been done in favour of the CENTRE.
- b. Discrepancies amounting to Rs. 3.94 lakhs (previous year – Nil) between physical and financial records in respect of the assets located at Bangalore (the value of such discrepancies in respect of the assets at Delhi have not yet been quantified), arising due to the exercises carried out recently by the Management at Physical Verification of all Fixed Assets, and their reconciliation with the financial records, have not been given effect to in these accounts. These discrepancies are being examined. The effect thereof will be given in the accounts for the year 2011-12.

2.0 Capital Work-in-Progress

- a. The cumulative expenditure, incurred since 2008-09, on the proposed Housing facility at the Campus at Delhi, was Rs. 44.60 lakhs as at 31.03.2011 (Rs. 44.60 lakhs as at 31.03.2010).
- b. The expenditure under this head will be capitalized appropriately under "Fixed Assets", upon completion of the Housing Facility.

3.0 Investments

- a. The aggregate of the investments in the equity of a Joint Venture Company engaged in Scientific Research in the field of Telecommunications was Rs. 5200.00 lakhs as at 31.03.2011 (Rs. 5200.00 lakhs as at 31.03.2010).
- b. No provision has been made in these accounts in respect of the possible erosion in the value of the investments in that company, due to the reported erosion in its net worth, in view of the fact that, the said company has made operating profits during the year ended 31.03.2011.

4.0 Current Assets, Loans, Advances and Deposits

- a. Inventory of Components includes:
 - i. An amount of Rs. 151.24 lakhs as at 31.03.2011, being components which remained unmoved for four years on that date (Rs. 488.60 lakhs as at 31.03.2010). In accordance with the policy consistently followed, appropriate accounting for any possible diminution in the value of these components will be made in the accounts for the year in which they will be disposed off.
 - ii. The value of Components, which were purchased in the past years, issued to the indentors, treated as consumed in the accounts of the year of issue, but part of which were returned during the current year by the indenting groups unconsumed - Rs. 1.01 lakhs as on 31.03.2011 (Rs. 16.64 lakhs as at 31.03.2010).

- b. Sundry Debtors
- I. The aggregate balance consists of:-
 1. Dues by way of fees for Transfer of Technology (TOT) and Royalties from licensees - Rs. 3628.80 lakhs as at 31.03.2011. (Rs. 3628.80 lakhs as at 31.03.2010)
 2. Dues for other services rendered by the centre – Rs. 820.14 lakhs as at 31.03.2011 (Rs. 7252.35 lakhs as at 31.03.2010).
 - II. In making these accounts, the following have been kept in view in regard to the dues indicated at Para I(1).
 1. TOT & Royalty dues of Rs. 2279.99 lakhs as at 31.03.2011 (Rs. 2279.99 lakhs as at 31.03.2010), due from the concerned licensee has been fully met by the value of the land and buildings at Bangalore belonging to that licensee taken over / occupied by the centre since 2005.
 2. The orders of the DOT to pay to the said licensee a further sum of Rs. 330.00 lakhs as additional value for the land and buildings taken over have not been given effect to in these accounts, pending completion, by that Licensee, of the necessary formalities.
 3. In respect of the Royalty dues from two other licensees amounting to Rs. 848.28 lakhs as at 31.03.2011 (Rs. 848.28 lakhs as at 31.03.2010), no part of the same is considered doubtful of recovery, in view of the confirmations, both direct as well as indirect, received from them, acknowledging their dues.
 4. As regard the balance amount of Rs. 500.53 lakhs as at 31.03.2011 (Rs. 500.53 lakhs as at 31.03.2010), a provision for doubtful debts has been made in these accounts (previous year - Nil).
- c. The aggregate of the amounts realizable, by the centre as at 31.03.2011, on account of projects undertaken by it, for other organizations on reimbursement of cost basis, was Rs. 2372.18 lakhs (Rs. 1978.41 lakhs as at 31.03.2010). All these amounts, which are included under "Claims Recoverable" are considered good for recovery. Hence, no provision has been made in respect thereof, while making these accounts.

5.0 Contingent Liability not provided for

- a. On account of unexpired letters of credit issued by bankers in respect of purchase orders for procurement of components and equipment – Rs. 382.08 Lakhs as on 31.03.2011 (Rs. 68.14 lakhs as on 31.03.2010).
- b. On account of bank guarantees given by / on behalf of the centre of Rs. 8.80 lakhs as on 31.03.2011 (Rs. 51.65 lakhs as on 31.03.2010).
- c.
 - i. Income Tax demanded by the Department, disputed by the centre, for the Assessment Years 2003-04, 2005-06, 2006-07, 2007-08 and 2008-09, amounted to Rs. 7538.30 lakhs (previous year – Rs. 2128.67 lakhs).
 - ii. The centre has filed a writ petition before the Hon'ble High Court at Delhi, which granted stay of demand.
 - iii. Notwithstanding the above, the department has withdrawn from the centre's account Rs. 665.23 lakhs, which has been protested by the centre.
 - iv. For the balance amount of the tax demanded, for the years indicated in (i) above, no liability is considered in these accounts, in view of (ii) above.

PART - B : Income & Expenditure

1.0 Income:-

- a. In spite of recognizing income on accrual basis:
 - i. Interest accrued for the current year, on the loans given to a Joint Venture by the centre, amounting to Rs. 221.49 lakhs, has not been considered as income for the current year. As for the previous year, Rs. 189.97 lakhs was not considered in respect of the same account; and
 - ii. Though latest information available from the Tax Credit System in the public domain seems to indicate an accrual of income, amounting to Rs. 652.51 lakhs, no part of this amount has been considered as income for the current year, as the centre is not able to relate this amount to any of the services rendered in the current year. (previous year – Nil)

2.0 Expenditure:-

- a. The accounts for the current year include an additional provision amounting to Rs. 290.19 lakhs on account of Gratuity payable to employees based on actuarial valuation (previous year – Rs. 335.61 lakhs).
- b. However, no provision is being made in these accounts on account of the liability in respect of earned leave of employees. Had such a provision being made, the expenditure for the year would have been higher by Rs. 332.71 lakhs (previous year – Rs. 139.00 lakhs).
- c. The value of components consumed during the year was Rs. 1238.39 lakhs (previous year – Rs. 537.38 lakhs), This value has been arrived at by reducing the value of the closing stock of the component as at 31.03.2011, from the aggregate of the values of the opening stock as on 01.04.2010 and the purchases made during the year 2010-11.
- d. The net result of the fluctuations in Foreign Exchange on transactions in foreign currencies during the year was a loss of Rs. 1.02 lakhs (previous year – a gain of Rs. 1.59 lakhs)

PART - C : GENERAL

- a. The nature of activities of the CENTRE is such that these have been assumed to be not resulting in any 'manufacture' and 'sale' of products. As a consequence, the provisions of the statutes relating to taxation on manufacture and Sale of Products are not deemed to apply in the case of the CENTRE. However, some of the technical services rendered by the CENTRE have been recognized as services attracting the levy of service tax. In such cases, applicable taxes have been either paid or admissible credits therefor assumed, in making these Accounts.
- b. Previous Year's figures have been re-grouped/re-arranged, wherever necessary.

Sd/-
P. Venkatesan
Chief Finance Officer

Sd/-
V.K. Issar
Partner
M/s. Rajendra K. Goel & Co.
Chartered Accountants
M.No. 9519
FRN - 01457

Sd/-
V.V.R. Sastry
Executive Director

Analysis of Sundry Debtors included in Schedule 7 – Current Assets, Loans & Advances and Deposits

(In Rupees)

| Sl.No. | Particulars | As at 31.03.2011 | As at 31.03.2010 |
|--------|--|------------------|-------------------|
| 1. | TOT/Royalty receivable: | | |
| | BEL Bangalore | 41,94,553.00 | 41,94,553.00 |
| | BHEL | 60,38,463.00 | 60,38,463.00 |
| | CGL | 2,05,02,722.00 | 2,05,02,722.00 |
| | HTL | 6,58,89,681.00 | 6,58,89,681.00 |
| | ITI | 22,79,99,999.00 | 22,79,99,999.00 |
| | IL, Kota | 1,69,95,329.00 | 1,69,95,329.00 |
| | PCL, Chandigarh | 1,89,37,915.00 | 1,89,37,915.00 |
| | Rajasthan Telecom | 22,72,000.00 | 22,72,000.00 |
| | Technocord | 50,000.00 | 50,000.00 |
| | Total (1) | 36,28,79,663.00 | 36,28,79,663.00 |
| 2 | Field Support Receivables (BSNL) | 8,19,99,500.00 | 72,33,31,602.00 |
| 3 | Others | 14,400.00 | 19,03,635.00 |
| 4 | Total (1+2+3) (*) | 44,48,93,563.00 | 1,08,81,14,900.00 |
| 5 | Less: Provision for doubtful debts (#) | 5,00,53,067.00 | 0.00 |
| 6 | Net Sundry Debtors (4-5) | 39,48,40,496.00 | 1,08,81,14,900.00 |

(*) – This is the value of Gross Sundry Debtors disclosed under Schedule 7 to the audited Accounts for the year 2010-11.

(#) – This was the provision made on account of the TOT / Royalty dues from BEL, BHEL, CGL, IL Kota, RTL and Technocord, as these balances have been due for a long time. The provision is inspite of the fact that recovery action like arbitration, etc., have been resorted to in these cases. In the case of the remaining three licensees, the amounts due were deemed to be recoverable. Hence, no provision was made.

Our Bankers

Canara Bank

C-DOT Campus, Mehrauli,
New Delhi-110 030

Syndicate Bank

Corporate Finance Branch
6, Sarojini House, Bhagwan Dass Road
New Delhi-110 001

Canara Bank

Electronic City-I, Hosur Road,
Bengaluru - 560 100

Central Bank of India

Sona Towers, 71/1, Millers Road
Bengaluru - 560 100

Our Statutory Auditors

Rajendra K. Goel & Co.

Chartered Accountants
J-288, Ground Floor
Saket
New Delhi - 110 017

Our Offices

C-DOT

C-DOT Campus
Mehrauli
New Delhi-110 030

C-DOT

Electronics City
Phase-I, Hosur Road
Bengaluru - 560 100

C-DOT

Field Support Centre, P-108, Ground Floor
Lake Town, Block-A
Kolkata-700 089



Centre for Development of Telematics

C-DOT Campus, Mehrauli, New Delhi-110 030

Electronics City, Phase-I, Hosur Road, Bengaluru-560 100
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