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REVIEW OF PERFORMANCE OF STATUTORY AND AUTONOMOUS BODIES

6.0 REVIEW OF PERFORMANCE OF STATUTORY AND AUTONOMOUS BODIES

6.1 Statutory Organization

6.1.1 Controller of Certifying Authorities (CCA)

The Controller of Certifying Authorities (CCA) continues to promote the growth of e-commerce and e-governance through the use of digital signatures. The number of digital signature certificates issued continues to grow and is expected to increase significantly with the launch of e-governance programmes. Initiatives have been taken in this respect through coordinated interactions between the e-governance application service providers and the Certifying Authorities.

Targets and Achievements during the year 2010-11 (Up to 31.12.2010)

Targets	Achievements
Implementation of the provisions of the IT Act as a regular activity in respect of licensing of Certifying Authorities and exercising supervision over the activities of Certifying Authorities. More number of Certifying Authorities may be added during this period.	Processing of application for new Certifying Authority, necessary approvals for changes in the Licensing conditions, Examination of Audit Reports, changes to CPS and addressing CA and User concerns during the year.
Continuation of the operations at the primary site in New Delhi for the Root Certifying Authority of India (RCAI), the National Repository of Digital Signature Certificates (NRDC) & CCA's web site and at the Disaster Recovery site for the RCAI at CDAC Bangalore.	Services of RCAI, website and DR site were carried out successfully, Audit of RCAI & DR site, Software upgradation at RCAI & DR site.
More number of applications to be PKI enabled specially in E-Governance area and in the financial sector.	Discussions held with e-Governance Division of DIT on various occasions regarding specific requirements of e-Governance applications. Exploring the possibility of newer Technology for signing (like XML signature) under the IT Act, 2000.
Awareness generation programmes, one-day, two-day and three-day, to be conducted in various cities/institutions to promote the use of digital signatures and focus to be given on more practical experience of using the digital signatures. PKI lab to be setup at	A number of one-day, two-day and three day symposiums were conducted across the country in association with CDAC, Bangalore under PKI Outreach Programme.

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CDAC Bangalore.	
Training programmes for investigating agencies, judicial officers, and other agencies to benefit user organizations as well as service providers.	Some programs were conducted through CDAC specifically for user organizations. Officers from Office of CCA participated in various Training Programmes.
Upgradation of Standards mandated under the IT Act, 2000 Rules and Regulations and introduction of new technologies in the Public Key Infrastructure of the country.	The subscriber's Keys to change to higher length to 2048 bit from 1024 bit, Similarly the possibilities for changing the Hash function to SHA2 from SHA1.
PKI enabled applications to become interoperable so as to avoid the hassle of maintaining multiple certificates by the users.	Certifying Authorities to start issue of Certificate as per the Interoperability guidelines. Similarly the Certifying Authority Certificate & Root Certificate being issued as per Interoperability guidelines.
Operationlisation of the Online Certificate Validation Service (OCVS).	Finalization of Vendor and mode to be operated.
Installation of the new web infrastructure.	Responses received have been Evaluated.
Publication of Guidelines for Time Stamping Services.	Formulation of Policy for Time Stamping Services and Certificate Polices.
Empanelment of Law Firms/Lawyers.	Evaluated the applications from various Law firms/individual lawyers for empanelment.
Indian Certifying Authorities to promote and start the process of issuance of Digital Signature Certificates in Mauritius.	Identified Indian Certifying Authorities by ICTA Mauritius to start issuance of Digital Signature Certificates in Mauritius.
Incorporating CCA's Root Certificate in various Browsers.	After incorporation CCA's Root Certificate in Microsoft IE Browser, process initiated for pre-installation of CCA's Root Certificate in Mozilla Firefox.
The number of Digital Signature Certificates issued by licensed Certifying Authorities likely to grow to 17 lakhs.	The number of Digital Signature Certificates issued by licensed Certifying Authorities has grown to more than 19 lakhs.

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6.1.2 Cyber Appellate Tribunal (CAT)

In accordance with the provision contained under Section 48(1) of the IT Act 2000, the Cyber Regulations Appellate Tribunal (CRAT) has been established in October, 2006. As per the IT Act, any person aggrieved by an order made by the Controller of Certifying Authorities or by an Adjudicating Officer under the Act can prefer an appeal before the Cyber Appellate Tribunal (CAT). This Tribunal is headed by a Chairperson who is appointed by the Central Government by notification as provided under Section 49 of the IT Act 2000.

Before the amendment of the IT Act in the year 2009, the Tribunal was known as CRAT and the Chairperson was known as the Presiding Officer. Provision has been made in the amendment Act for the Tribunal to comprise a Chairperson and such number of other members as the Central Government may notify/appoint. The name of CRAT has also been changed to CAT.

At present the CAT is functioning At Jeevan Bharti Building, New Delhi. The present Chairperson who joined the Tribunal in February 2009 has been extensively interacting with all the concerned Authorities/Officers to make them aware of the functioning of the Tribunal. He has participated in various National level Seminars, Conferences, Workshops and Co-hosted a Western Regional Consultation Meeting on Cyber Law Enforcement Programme of National Project Committee on Enforcement of Cyber Law in which participants were Hon'ble Judges of Supreme Court, Judges of High Courts including Maharashtra, Chief Justices of High Courts, Judicial Officers of many states, senior officials of the Government of India. During this period the Tribunal handled a number of appeals and disposed off 7 cases.

Website of the CAT was launched and is operational. Video Conferencing System is being established to enable interaction with IT Secretaries of various States and the Appellate Tribunal at Delhi.

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6.1.3 Semiconductor Integrated Circuits Layout Design Registry (SICLDR)

Govt. of India has enacted Semiconductor Integrated Circuit Layout Design Act 2000. The legislation lays down mechanisms for registering and protecting the intellectual property of the Integrated Circuit Layout Designs. Section 5(1) of the Act provides for establishment of Registry to be known as Semiconductor Integrated Circuits Layout Design Registry. The Registry is to receive IP Registration applications, make determinations on the ones eligible for Registrations and grant Registrations. The Registry is to be headed by Registrar appointed by Government as per section 3(1) of the Act. Semiconductor Integration Circuits Layout Design Registry (SICLDR) has been put in place for receiving IP Registration applications and granting Registration to eligible cases. The Registry will have jurisdiction all over India. The relevant Sections of SICLD Act are being brought into force to make the Registry operational.

Targets and Achievements during the year 2010-11 (Up to 31.12.2010)

Targets	Achievements
Augmentation of Data Centre and Inspection and Verification Facility	Data Centre augmentation pursued with procurement of servers, storage unit and support items. These are installed. Procurement of advanced diagnostic tool for IC layout Design evaluation is in progress.
Evolution and Initiation of new R&D projects in the SICLD Area.	Project entitled “Specialised Human Resource Development in IC Layout-Design” initiated at Pune University. Around 150 specialised manpower – M.Sc. (One full semester IC layout-design course) and P.G. Diploma Course in IC Layout-Design, over a period of 3 years would be developed under the project. M.Sc. (one semester) IC layout-design course has been initiated.
R&D projects in the prior-art IC Layout Design data base creation	Two projects at Pune University and C-DAC, Noida for augmenting SICLD Registry database progressed. Creation of Layout-Design database for Digital, Analog & Mixed Signal from Prior Art Sources is in process. Design and Development of Front-end and Back-end applications for data at C-DAC Noida is under progress.
Make operational the SICLDR office for filing of IP applications	Draft Notification vetted by legislative Department for bringing-into-force Sections of Act for making registry operational.

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6.1.4 Indian Computer Emergency Response Team (CERT-In)

CERT-In is the national nodal agency for responding to computer security incidents as and when they occur. CERT-In creates awareness on security issues through dissemination of information on its website (<http://www.cert-in.org.in>) and operates 24X7 Incident Response Help Desk. It provides Incident Prevention and Response services as well as Security Quality Management Services.

Targets and Achievements during the year 2010-11 (up to 31.12.2010)

<i>Objectives/Targets</i>	<i>Achievements</i>
Continuous upgradation of CERT-In facilities and capabilities to counter growing cyber security threats. Facility for collection of samples and analysis for anti-virus signatures.	<ul style="list-style-type: none"> • A new dynamic web site of CERT-In has been hosted. • Facilities and capabilities were enhanced by adding Application and signature based threat detection systems. • A web application firewall has been added to enhance the security of the network for protection from layer 7 attacks • The proposal for setting up a disaster recovery centre for CERT-in has been approved and is planned to be set up by March 2011.
Enhancing the security of communications and information infrastructure in the country	<ul style="list-style-type: none"> • Around 5362 security incidents handled. • 12153 Indian website defacements tracked. Incident Response and Advice for prevention provided to affected organisations. • 1785 open proxy servers in India were tracked and actions were taken to mitigate the same. • Around 1635212 Bot infected systems and 24 Command & Control servers were tracked in India. • 22 Security alert/ incident notes issued. • 47 Security Advisories issued. • 165 Security Vulnerability notes issued. • Security Bulletins covering various cyber security issues, intrusion trends and defence mechanisms are being published every month. • Participated in international incident handling drill in September 2010 • One manual was released in September 2010
Upgradation of Cyber Crises Management Plan	The Cyber Crises Management Plan has been upgraded.

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6.2 Societies/Autonomous Bodies

6.2.1 Society for Applied Microwave Electronics Engineering & Research (SAMEER)

SAMEER is a premier R&D institution working in the hi-technology area of microwave and allied disciplines. SAMEER has a long-term strategy, which consists of building of expertise by doing core R&D and keeping abreast of latest trends and state of art technologies. This is achieved by building up the infrastructure for making R&D and deliverables viable and meaningful in terms of technology and duration. This institution continues to be in a position of strength in handling design, development and delivery of hardware to meet stringent specifications of user agencies in its expert areas of High Power RF amplifiers, RF communication systems, Atmospheric Radar Instrumentation, Linear Accelerators, Electromagnetic Interference/compatibility (EMI/EMC), Thermal Engineering of electronic hardware, RF/Microwave/Millimeter wave antennas, Photonic devices, Microwave components/modules and Industrial RF/Microwave application products.

Targets and Achievements during the year 2010-11 (up to 31.12.2010)

<i>Objectives/Targets</i>	<i>Achievements</i>
Build-up expert design domains catering to the needs of latest technology. Design and development of application specific systems as per user needs	One Radiosonde receiver delivered to IMD; Four CDMA receivers for secure data link made ready for users for ATP evaluation. One Linac developed & deployed; Assembly of one medical Linac completed; Ten Sleeve Monopole antenna delivered to user agency; Five High performance patch antenna delivered and accepted by user agency; One RF dryer commissioned at Jorhat and the other unit is being shifted to Agartala; and One 25 kW RF dryer for Yarn Drying is deployed at Industrial unit. Design of millimeter wave components including phase locked loop oscillator, pulsed power amplifiers completed.
To offer test, design validation services to industries	515 test assignments completed for various Industries & National agencies. 4 Thermal design analysis were carried out. Auditing was carried out by NABL and NABL Certification obtained.

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<i>Objectives/Targets</i>	<i>Achievements</i>
To enhance the design knowledge of engineers in Indian industries and to provide advanced level courses in Indian Universities for facilitating graduates to understand the advanced topics.	Engineering students at B. Tech and M. Tech levels carried out their project work under guidance of SAMEER Scientists. Training program in the areas of EMI/EMC, thermal design and antennas are carried out periodically.
Establishment of advanced design and test facilities	Establishment of Electronic design centre is in progress at SAMEER Chennai. Facility of Compact Antenna Test Range for antenna performance evaluation established at SAMEER Kolkata. Linac batch production and research facility established at SAMEER Navi Mumbai campus.

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6.2.2 Centre for Development of Advanced Computing (C-DAC)

Centre for Development of Advanced Computing (C-DAC) is a Society of the Department of Information Technology (DIT), carrying out R&D in IT, Electronics and associated areas. Starting from its initial mission on building indigenous supercomputers, C-DAC has progressively grown to build an eco-system and institutional framework for innovation, technology development, skills development, delivery plans, collaboration, partnership and market orientation in a number of niche areas of national importance and market relevance in ICT and Electronics Through in-house research, technology and product development efforts in collaboration with Academia, Research Labs and Industry in India or abroad, it endeavors to identify promising ideas nurtured building of ideas and competencies convert many of them into practical tools, technologies, products and services to meet the needs of: SMEs and other industrial players in the country; intermediate players; and end-users in Science and Engineering, manufacturing & service sectors, government, health, development and strategic sectors.

Targets and Achievements during the year 2010-11 (up to 31.12.2010)

Targets	Achievements
Upgraded National PARAM Supercomputing Facility	<ul style="list-style-type: none"> • 200 TB storage systems has been installed and tested for read-write performance • Validated the 48-node PARAMNet installation on PARAM Yuva with diverse set of benchmarks and applications
HPC Applications on PARAM Yuva	Reconfigurable Computer System (RCS): Successfully completed performance optimizations and benchmarking for Reconfigurable Computing (RC) enabled Bioinformatics search application on PARAM Yuva
Shared e-Science resources infrastructure	Concept paper for Exascale computing has been presented to Scientific Advisory Committee (SAC) to Prime Minister and Planning Commission
Grid Technology Services for Operational Phase of Garuda	Garuda migrated to NKN in 32sites; Grid services such as compiler, VOMS and Protein Structure Prediction (PSP)released
Applications of National Importance on Garuda	<ul style="list-style-type: none"> • Indian Grid Certificate Authority (IGCA) issued more than 250 Certificates • Enhanced versions of Middleware and Tools of Garuda released • Pilot scientific applications in the area of bioinformatics and CFD are being tested and ported Grid infrastructure • Additional computational resources such as Physical Research Laboratory (PRL), Ahmedabad and Jawaharlal Nehru University (JNU), Delhi have been added on Garuda, Grid network.
Building R&D infrastructure at Chennai, Delhi, Hyderabad,	Thiruvananthapuram: Water Tank and Lift room work completed and 95%

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Pune and Thiruvanthapuram and additional infrastructure at Mohali and Kolkata	<p>of Masonry and plastering works completed at 45% of Electrical & Plumbing work completed; 45% flooring & fire protection work completed.</p> <p>Pune: Plinth completed; Brickwork 95% completed; Internal Plastering: Upper Ground Floor to 6th floor completed; External Plastering: Lower & Upper Ground Floor completed, 6th floor & above 70% completed.</p> <p>Hyderabad: Civil structure completed and finishing work is in progress.</p> <p>Mohali: Building proposal submitted to DIT for consideration</p>
Online/Offline OCR/OHR to cross lingual information Retrieval (CLIR)	EILMT: EILMT system launched on the TDIL Data centre on 12 th November 2010. Proposal has been submitted for Phase II of the EILMT project to DIT
Machine translation systems from English to Indian language	ILMT: Project has been completed
Text to speech, speech to text and speech to speech and search engine, offline character recognition system, etc. with unique tools for Indian language with key-board standards	CLIA: Proposal submitted for Phase II of the CLIA project to DIT by the consortia
Indian Language browser, speech interfaces Automatic Speech Recognition (ASR) System, Speech engine specific to Indian language	Online Character Recognition for handheld devices completed with average recognition rate of 94% at character level
Manuscript processing tools	Demo Web Interface for Text to Speech System for Malayalam completed
Software Defined Radio (SDR) - Phase II	FPGA Architecture Completed; Waveform Definition Document completed; Base band schematic design completed; Boards for RF proto development completed
Tetra Wi-Max base station prototype	Design of Authentication system completed. Access Service Network gateway design completed
Intelligent transportation system	Wireless Traffic Control System (WTCS), Lab model of Intelligent Parking Lot Management System (IPLMS) and Red Light Violation Detection System (RLVDS) demonstrated to the members of National Steering Committee (NSC) meeting
Development of Advance Hearing Aid technology	Action for field trials and mass production of Body-Worn Digital Programmable Hearing Aid completed
Next Generation Acoustic Land mine Detector	Five sets of vibration sensor card tested and integrated; Fabrication of mechanical assembly of test setup completed. Pulse-scanner tested
Application of Digital Image Processing Technologies in Tasar Sericulture	Project proposal approved by National Steering Committee (NSC)
CPE Based E-Tongue development	Proposal under preparation

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Software as a Service (SaaS) Framework	New stack of software released for SaaS based applications environment
Enhancements to BOSS Linux; Deployment of BOSS Linux in e-Gov and IT@School	Basic Distributed version of NetBOSS has been ported on a sample Samsung Netbook Device; EduBOSS Linux is being installed in all the schools (31000 machines) of Haryana State.
Development of new e-Governance products, Solutions	InDg: Initiated piloting of services in 4 states (5 Common Service Centre Clusters); Completed 3 services (Vyapar, Real Time Weather Forecast & Ask an Expert)
Replication of already developed e-Governance in the state and central government Departments	OMMAS for PMGSY: Comprehensive Quality Monitoring module released for scheduling inspections and compilation of observations
Workflow engine for NeGP Projects	KAVERI: Feature for digitally signed registered documents for delivery through citizen service centers introduced and successfully piloted at identified Sub Registrar office
Mobile Governance (including Mobile Health Monitoring)	Proposal under consideration
Digital Preservation & Information Rights Management	Proposal under consideration
Geomatics solutions: <ul style="list-style-type: none"> • Forest Management • ISRO GBP project on Landuse Landcover dynamics of Western Ghat of India 	<ul style="list-style-type: none"> • Forest Department prepares Working Plan for management of forest resources. A Module on working plan is developed under this project • Interpretation of satellite data of 1995 and 2005 is completed
Development of Cyber Forensics tools for embedded systems	Field Testing in progress for Enterprise Forensics System; conducted around 50 workshops for masses across country
Information Security Awareness and Education and Awareness (ISEA)	Conducted around 200 workshops for creating awareness
Face Recognition Engine (FRE)	FRE V4.0 is under field trial
Malware Prevention System	Completed the development and testing of the generalized Client-Server based Malware prevention system for Windows and Linux environments and the solution is being evaluated by the user agencies
Cyber-Security in Hierarchical Wireless Sensor Networks for Industrial Applications	Proposal under conceptual stage
Enhancement of SDK for DICOM and SDK for HL7	The SDK Suite v2.1 has been released for DICOM PS3.0-2004 and HL7 2.5. Few enhancements / fixes requested by evaluators / users are being carried out for release as patch/fix
Digital Image Structural Analysis and Metadata Extraction for Comparative Image Study Leading to Diagnostics	Conceptualization of project has been completed
Medical Image Processing System for Automated PAP Smear screening	E-smear-calibration feature completed; Cerviscan GUI design completed. Feature extraction and feature ranking completed.
Public Health Information Network (PHIN) compatible	Proposal preparation in progress

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outbreak detection and management system	
Automated Diagnosis System for Mammograms	Proposal under consideration
KM based smart Hospital Management System	Project completed
Distributed EHR System	Study & Analysis of EHR activities in other countries and relevant standards, codes, and frameworks completed
Establishment of National Level Ubiquitous Computing Research Resource Centres	Adaptive Framework for WSN completed and distributed to end-users. U-Learning with security prototype deployed; Deployment of Intrusion Detection System (In2DS) completed
Application development – showcasing ambient assisted living and health care	<ul style="list-style-type: none"> • Smart Parking (SPARK) deployed at Greater Hyderabad Municipal Corporation parking complex, Hyderabad; Epidemic Analyzer prototype is being developed as a part of Ubiquitous Healthcare application. • Activity Recognition framework is being tested with Accelerometer board • Design and development of IEEE 802.15.4 compliant MAC IP core has been completed

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6.2.3 Department of Electronics Accreditation of Computer Courses (DOEACC) Society

DOEACC Society, an Autonomous Scientific Society under the administrative control of Department of Information Technology, Ministry of Communications and Information Technology, Govt. of India, was set up to carry out Human Resource Development and related activities in the area of Information, Electronics & Communications Technology (IECT). The Society has 15 Centres at RIELIT Agartala, Aizawl, Aurangabad, Calicut (with Southern Regional Office at Pudukkottai), Chandigarh (with 3 branches at Shimla, Lucknow & New Delhi), Chennai, Gangtok, Gorakhpur (with Eastern Regional Office at Patna, Bihar), Imphal, Itanagar, Srinagar/Jammu, Kohima/Chuchuyimlang, Kolkata, Shillong and Tezpur/Guwahati with its Headquarter at New Delhi. The DIT has also approved setting up of RIELIT at Ajmer. The objective of the DOEACC Society is to carry out Human Resource Development and related activities in the area of Information, Electronics & Information Technology (IECT). The Society is engaged both in the Formal & Non-Formal Education in the area of IECT besides development of Industry oriented quality education and training in the state-of-the-art areas and establish standards to be the country's premier institution for Examination and Certification in the field of IECT. It is a National Examination Body, which also accredits institutes/ organizations for conducting courses in the non-formal sector of IT Education & Training.

Targets and Achievements during the year 2010-11 (up to 31.12.2010)

<i>Activities/Targets</i>	<i>Achievements No. of students (Trained / Undergoing training)</i>
DOEACC Scheme	
O/A/B & C Levels (Non-formal Sector of IT Education & Training) Half Yearly Examinations. Target: 20,000 students to be trained	5,823 (July' 10 Exam qualifiers)
DOEACC Centres	
To Conduct Training for formal sector Long Term Courses (M. Tech, MCA, BCA, PGDCA, Diploma, Diploma in Electronics Engg. & Computer Science etc.) Target: 1,700 students to be trained	1,748
To conduct training for non-formal Sector Long Term Courses O/A/B Level Course, Bio-informatics O/A Level Courses, Hardware Courses O/A Level Target: 13,500 students to be trained	3,876
Training for Short Term Courses of duration less than 1 year Target: 11,500 students to be trained	7,405

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<i>Activities/Targets</i>	<i>Achievements No. of students (Trained / Undergoing training)</i>
ITES-BPO Programme Target: 1,800 students to be trained	541
IT Literacy Programme (CCC course) Target: 90,000 students to be trained	91,869 appeared in CCC examination. 68,527 qualified in CCC examination.
Other Major Achievements of DOEACC	
<p>Other major Achievements</p> <ul style="list-style-type: none"> • 02 candidates of DOEACC Centre, Aurangabad has been awarded PhD(Engineering) by Dr. B.A.M University. • DOEACC Centre, Calicut has conducted Staff Development Programme on “Digital System Design using Verilog HDL” from 19 to 30 April 2010, under the sponsorship of AICTE. • Started new PG Diploma program in Embedded Wireless & Mobile Applications at DOEACC Centre, Calicut, in addition to 4 other PG Diploma programme. • Approval received from Government and AICTE for starting M.Tech program in Electronics Design & Technology at DOEACC Centre, Calicut. • Online Courses in .NET Technologies and J2ME started at DOEACC Centre, Calicut. • Computerization of more than 30 Hindu temples in the Malabar Region, Kerala. • DOEACC Centre, Calicut has got ISO 9001:2008 Certification from June 2010. • DOEACC Society, Gorakhpur has launched web site http://eshiksha.edu.in for web based education and launched following Certification programme through E-Learning mode: <ul style="list-style-type: none"> - Certificate Course in VHDL Programming - Certificate Course in VB.Net - Certificate Course in Embedded System Design - Certificate Course in Bioinformatics - Certificate Course in C# • Virtual Training Environment (VTE) Lab was setup by DOEACC Society Gorakhpur Centre at ISEA LAB, DIT New Delhi. Training was conducted for 18 trainees on “Information Security” at ISEA LAB, DIT New Delhi. • Information Security Education & Awareness (ISEA) workshop conducted by DOEACC Society Gorakhpur Centre at Gorakhpur, Patna and Puri. 	

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6.2.4 Software Technology Park of India (STPI)

Software Technology Parks of India has been set up as an Autonomous Society of the Department with an objective to implement STP/EHTP Scheme, set-up and manage infrastructure facilities and provide other services like technology assessment and professional training. The main services rendered by STPI for the software exporting community have been statutory services, data communications services and incubation facilities. STPI has also played a developmental role in the promotion of software exports with a special focus on SMEs and start up units. The STP scheme has been widely successful and the exports made by STP units have grown manifold over the years. Today the exports by STPI registered units are more than 90% of the total software exports from the country. STPI has also been providing incubation facilities for the software exporters, specifically to the SMEs and start up units. The incubation facilities include ready to use built up space with plug and play facilities and other backup resources such as power, DG set, internet enabled workstations etc., which have been very useful for the start-up units and SMEs.

Targets and Achievements during the year 2010-11 (up to 31.12.2010)

Targets	Achievements
<p>To promote exports of electronics & IT</p> <p>This program is for promotion of exports and provides facility to Indian Small and Medium Organizations for participations in export promotion events in the software and electronics sectors.</p>	<p>Organized/participated/sponsored/Co-sponsored following Export Promotional events</p> <p>(a) Sponsored TiE Entrepreneurship Summit (TES), Dec 21-23, 2010 at New Delhi.</p> <p>(b) Sponsored “Connect 2010” from 8th to 9th September, 2010 at Chennai.</p> <p>(c) Sponsored “TiECon-2010 on 24th November 2010” at Chennai.</p> <p>(d) STPI participated in the ICT 2010 at Brussels, Belgium for facilitating the IT Export business growth, to get better exposure of leading policies on IT/ITES sector including IT parks, network solutions & Datacom operations.</p> <p>(e) STPI Co-Hosted Bangalore IT.Biz from 28-30 Oct., 2010 at Bangalore.</p> <p>(f) STPI Co-Hosted E-revolution 2010 from 29-30 Sept., 2010 at Chandigarh.</p> <p>(g) STPI participated e-India 2010 from 4-6 Aug., 2010 at Hyderabad.</p>

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6.2.5 Centre for Materials for Electronics Technology (C-MET)

Centre for Materials for Electronics Technology (C-MET) has been set up as a Society under Department of Information Technology as a unique concept for development of viable technologies mainly in the area of electronics materials. C-MET is operating with its laboratories with well carved out programmes at Pune, Hyderabad and Thrissur. The objectives of CMET are to establish the technology up to pilot scale for a range of electronic materials transfer the same to industry for commercialization; to establish relevant characterization facilities; to undertake applied research activities in the area of its operation; to establish national Data Base on Electronics Materials.

Targets and Achievements during the year 2010-11 (up to 31.12.2010)

<i>Area/Projects & Physical Targets</i>	<i>Achievements</i>
<p>Integrated Electronics Packaging: Process for Integrated Glass-Ceramic Packaging</p> <p>Targets:</p> <ul style="list-style-type: none"> • Optimization of lead free solder bumping including bath composition and UBM • Selection of appropriate ferrite & dielectric material for LTCC applications 	<ul style="list-style-type: none"> • Optimization of soldering process was done for connecting/ soldering the kovar pins and the seal ring to the conductor pads of the LTCC package. • Optimization of photolithography process is in progress
<p>Nanomaterials and devices:</p> <ul style="list-style-type: none"> • Generation of Nano-powders, Nanocomposite & Quantum dots of metals/semiconductors/ for Electronics Technology and allied applications <p>Targets:</p> <ul style="list-style-type: none"> • Optimisation of parameters to obtain nano particles of metal oxides(ZnO and TiO₂) by Transferred Arc Plasma Reactor • A process for preparation of quantum dots of QDs of Cu₂Se and Ag₂Se in various matrices including polymers. • Bi₂S₃ doped glass-nanocomposites for X-Ray absorption. • BaSO₄- Polymer nanocomposite for X-ray absorption • Nanostructured CdIn₂S₄ as a Photocatalyst for hydrogen 	<ul style="list-style-type: none"> • Al nano particles were synthesized by varying the quench conditions and reactor pressure and characterized by using SEM, AFM and XRD. • The characterization of silver selenide samples by IR, XRD, TEM has been completed. • Hydrogen generation study was done using nanostructured marigold shaped CdIn₂S₄ as a Photocatalyst. • Quantitative X-ray absorption study of BaBi₂S₄ coated apron was carried out. • Fabricated p type copper aluminium oxide transparent films by dip coating technique

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<i>Area/Projects & Physical Targets</i>	<i>Achievements</i>
<p>generation.</p> <ul style="list-style-type: none"> • Development of n –type and p- type transparent conducting oxide thin films • Development of NTC Thermal sensors. 	<ul style="list-style-type: none"> • Three types of Chip thermistors of five different B-values were made and samples submitted to Sowparnika Thermistors, Kerala for testing and evaluation.
<p>Ultra high purity materials: Process technology /Pilot plant scale production of ultrapure metals</p> <p>Targets:</p> <ul style="list-style-type: none"> • Fine tuning and characterization of vacuum refining/ zone-refining of gallium. • Production of 7N Zn after establishing characterization of 6N purity Zn • Single crystal high purity Bi crystals of 6N purity. • Nanopowder preparation, optimization and subsequent production 	<ul style="list-style-type: none"> • 1.5 Kg/batch, vacuum refined gallium was zone refined by using horizontal rotating type zone refining system. • 6N pure Zn was prepared by vacuum distillation. • One Kg of 4N pure Bi was zone refined. • Annealing done in nitrogen atmosphere and in vacuum at 600^oC for FePt nano particles and Nickel nano particles with different compositions synthesized.
<p>Materials for Renewable Energy: Process for renewable energy material.</p> <p>Target: Fabrication of aerogel supercapacitors using carbon aerogel electrodes</p>	<ul style="list-style-type: none"> • Fabricated active electrodes for supercapacitors using carbon aerogel . • Fabricated prototype aerogel supercapacitors.
<p>Piezo sensors and Actuators: Process/technology for sensors and actuators.</p> <p>Targets:</p> <ul style="list-style-type: none"> • Development of ML bender actuator • Development of novel piezoelectric materials systems for microactuators 	<ul style="list-style-type: none"> • Fabricated bender actuators. • Fabricated PZT 5H thin film unimorph and evaluated its piezoelectric properties.

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6.2.6 Education & Research Network (ERNET) India

Education & Research Network (ERNET), India is an autonomous Scientific Society under the administrative control of the Department of Information Technology. ERNET India has been serving institutions in various sectors namely, health, agriculture, higher education, schools and science & technology and thus, understands the needs of these knowledge institutes. ERNET is helping to create a truly global research community where advanced resources and new learning can be effectively shared by connecting the research network in Europe with ERNET. ERNET network is a judicious mix of terrestrial and satellite based wide area network. ERNET Network Supports Ipv4 and Ipv6 Internet protocol in dual stack, unicast and multicast. Ipv6 routing protocol OSPFv3, end-to-end Ethernet services, Qos, Video Conferencing, authentication and authorization have also been implemented on ERNET network.

Targets and Achievement during the year 2010-11 (up to 31.12.2010)

Targets	Achievements
Upgradation of Technology & capacity of ERNET Network & extension of TEIN3 to South Asian countries including India, Creation of additional PoP in North East.	a. The upgradation of Network Infrastructure of ERNET is under Progress. b. The TEIN3 connectivity to India has been migrated to National Knowledge Network. ERNET is also connected to TEIN3. c. We are still waiting for go ahead from DIT for setting up additional PoP in North East
Work on mobile IPv6 Project and New R & D initiatives.	Mobile IPv6 and 6LoWPAN Projects are under progress.
Continuation of R&D initiative with EU through EU-India Grid 2 and other projects.	EU funded research projects under FP7 : BELIEF-II and 6Choice have been completed. EU-India Grid2 and My FIRE are under progress
Connecting schools under KVS, ICT Vocational Centre for disabled children.	a. VSAT Link has been installed at 25 KVs and remaining 13 KVs are in progress. b. 50 ICT Vocational centres have been setup across the country for the disabled students with special IT assistive tools and technologies. Next 50 centres are proposed to be setup in the 2nd half of 2010-11

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Targets	Achievements
VSAT Connectivity with Internet/Intranet access & IT infrastructure at 200 KVKs of ICAR	VSAT Connectivity with Internet/Intranet access & IT infrastructure has been provided to 200 KVKs of ICAR
Setting up of centralized secure Data Centre and intranet of 274 ICAR institutes	Received World bank approval for International bidding document submitted through ICAR. The open tender has been floated. A pre-bid meeting had been held on 22.09.2010. The bid process is in progress.
Digital Library Initiatives.	For setting up of digital library repository at ERNET, the hardware has been procured and installed at our PoP in Pune. Around 8 TB of data has been copied from Digital Library server at SERC, IISc and hosted on our repository at Pune. The connectivity to three scanning centres at SERC, IISc Bangalore; IIIT Hyderabad and CDAC Noida is being continued.

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6.2.7 Electronics and Computer Software Export Promotion Council (ESC)

Electronics and Computer Software Export Promotion Council (ESC) is mandated to promote India's exports of Electronics, Telecom, Computer Software and IT Enabled Services. Under the aegis of the Council, the IT services exports have reached to over 200 countries across the world establishing the hallmark of India's quality and competitiveness. In an Industry where the degree of technological obsolescence is very high, ESC is striving hard to elevate India's position in the international trading arena of the Electronic and Computer Software

Targets and Achievements during the year 2010-11 (up to 31.12.2010)

Targets	Achievements
Participation in Promotional Events abroad: The Council had planned to organize participation of Indian companies in 6 major international events abroad	The Council has since successfully organized participation of Indian Companies in 6 major international events abroad. These are: <ol style="list-style-type: none"> 1. ICT Expo 2010, Hong Kong, during April 13-16, 2010 – 17 Indian ICT companies under the banner of ESC participated 2. Communic Asia 2010, Singapore, during, June 15-18, 2010 – 7 Indian ICT companies under the banner of ESC participated 3. World BPO Forum, New Jersey (USA), July 28-29, 2010 – 10 Indian ICT companies under the banner of ESC participated 4. Costa Rica IT Alliance and Services Summit, Costa Rica, July 7-8, 2010 – 15 Indian ICT companies under the banner of ESC participated 5. The Internet Show, Abu Dhabi (UAE), September 25-26, 2010 – 7 Indian companies under the banner of ESC participated 6. Outsource World, New York, October 13-14, 2010 – 25 Indian companies under the banner of ESC participated. 7. GITEX, Dubai, October 18-22, 2010 – 40 Indian companies under the banner of ESC participated. The event resulted in 6,000 business enquiries which are expected to be materialized in the coming years. 8. Electronica, 2010, Germany, November 9-12 2010 – 18 exhibitors participated.
India Soft 2011	The 11 th edition of INDIASOFT, INDIASOFT 2011, will be held at Pune (Maharashtra) during March 25-26, 2011. This event will have 150 Indian IT companies catering to a host of solutions with value additions, three-dimensional growth in skills, technology and expertise, and around 350 IT buyers from more than 75 countries converging for business networking.

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Targets	Achievements
Publications: The Council has planned to bring out some publications etc.	<p>ELSOFTEX, the monthly newsletter of ESC contains features of market surveys, developments in the international trade, business opportunities, changes in Government policies and procedures.</p> <p>ESC publishes annual Statistical Year Book which gives details of India's exports in the Electronics, Telecom and Software / services sector</p> <p>ESC brings out reports of market surveys, importers' listings, directories, country reports etc for the benefit of its members.</p>
Participation in delegations abroad	<p>The Council organized some delegation visits abroad-</p> <ul style="list-style-type: none"> • Delegation visit to Egypt and Ethiopia, Nov 29 – Dec 5, 2010 • Delegation visit to Malaysia and Indonesia , Nov 29 – Dec 2, 2010
Buyer-Seller Meet	<p>ESC organized an exclusive Buyer-Seller Meet in Bangalore during July 7-8, 2010 to assist the member companies strengthen their foothold in Japan.</p>
Interactive meetings and Seminars	<p>ESC organized various interactive meetings, seminars, etc with visiting foreign delegation and senior government officials to provide its members a platform to share their experiences and put forward their problems in IT industry.</p>
Publications brought out	<ul style="list-style-type: none"> • ELSOFTEX, the monthly newsletter of ESC contains features of market surveys, developments in the international trade, business opportunities, changes in Government policies and procedures. • ESC publishes annual Statistical Year Book which gives details of India's exports in the Electronics, Telecom and Software / services sector. • ESC brings out reports of market surveys, importers' listings, directories, country reports, etc., for the benefit of its members.