

CHAPTER – VI
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 2009-10 (up to 31.12.2009)

<i>Targets</i>	<i>Achievements</i>
Implementation of the provisions of the IT Act in respect of licensing of Certifying Authorities and exercising supervision over the activities of Certifying Authorities.	Examination of Audit Reports, changes to CPS and addressing CA and user concerns done 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. Establishment of secure data com link between the primary site and the Disaster Recovery Site.	Services of RCAI, NRDC, website and DR site were carried out successfully
Efforts for integration of digital signatures with other applications with special focus on E-Governance applications.	Discussions held with e-Governance division on various occasions regarding specific requirements of e-Governance applications
Study on exploring the possibility of integration of digital signature certificates in mobile communication.	Discussion paper prepared and available technology options examined for compliance with requirements of the IT Act.
Awareness generation programmes, both one-day and two-day, to be conducted in various cities, to promote the use of digital signatures in the country.	A number of one-day and two-day symposiums were conducted across the country in association with CDAC, Bangalore under PKI Outreach Programme

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<i>Targets</i>	<i>Achievements</i>
Training programmes for investigating agencies, judicial officers, and other agencies to benefit user organizations as well as service providers.	It is proposed to hold training programmes at Nainital and Delhi during January to March, 10
Upgradation of Standards mandated under the IT Act, 2000 Rules and Regulations including with respect to the more stronger Hash function and introduction of new technologies in the Public Key Infrastructure of the country to be explored.	Notification issued for stronger Hash function
Publishing of Interoperability Guidelines for Digital Signature Certificates to be followed by CAs and for the benefit of user organizations and application developers.	Interoperability guidelines published
Finalisation of the technical specifications and vendors for operationlisation of Online Certificate Validation Service (OCVS).	RFP to be issued shortly
Finalisation of the technical specifications and the various suppliers for data centres for web infrastructure of CCA.	RFP responses received are being evaluated
CCA led a delegation comprising some Indian CAs and C-DAC to Mauritius in May 2009 for implementing the provisions of the MOU signed with ICTA, Mauritius. Workshops and Seminars were held during the week-long visit. Following this, steps will be taken to promote and start the process of implementation of PKI in Mauritius by selected Indian Certifying Authority(s).	Detailed implementation plan including specific action points under finalisation
New Empanelment of the auditors for auditing the operations of the CCA and the Certifying Authorities.	New list of empanelled auditors declared
Registration of the India PKI society for promotion of PKI related activities. Indian PKI forum to participate in the activities of the Asia PKI Forum.	Completed
Comments of the general public and the Certifying Authorities were sought on the draft Regulations for recognition of Foreign Certifying Authorities under the IT Act.	Regulations under consideration of DIT/Ministry of Law
Incorporating CCA's Root Certificate in the Microsoft IE Browser.	Completed
Notification of Regulations for recognition of Foreign Certifying Authorities under the Information Technology Act.	Regulations under consideration of DIT/Ministry of Law

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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 amended 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 Bharati 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 Training Programmes, Seminars/Conferences relating to Cyber Security, etc. During the year 8 appeals filed before the Tribunal. Hearing was held from time to time. Out of these appeals, one has been disposed off. Steps are being initiated for developing a portal for the CAT.

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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 Integrated Circuits Layout Design Registry (SICLDR) has been established for receiving IP Registration applications and granting Registrations to eligible cases. The Registry will have jurisdiction all over India. Registrar appointed by Government as per section 3(1) of the Act heads Registry. Sections 3 and 5 of SICLD Act are brought to force.

Targets and Achievements during the year 2009-10 (up to 31.12.2009)

<i>Targets</i>	<i>Achievements</i>
Augmentation of Data Center and Inspection and Verification Facility	Data Center augmentation pursued with procurement of servers, storage unit and support items. These are installed and 1 st stage works completed. 1 st version of Prior-art database ported at SICLD Registry. Advanced diagnostic tool for IC layout Design evaluation identified and procurement action initiated.
Commission study on Semiconductor IC Layout design Registrations	Study initiated as proposed and completed.
Evolution of R&D projects in the prior-art IC Layout Design data base creation	Two projects initiated and progressed. First version Prior-art modules for porting at SICLD Registry generated from these project works.
Operationalising SICLDR office for filing of IP applications	Action for bringing into force relevant sections of the SICLD Act to operationalise the Registry are initiated.
Diffusion of SICLD IPR matters	Technical exposures given at few institutions

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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 2009-10 (up to 31.12.2009)

<i>Objectives/Targets</i>	<i>Achievements as on 31-12-2009</i>
<ul style="list-style-type: none"> • Improvement in security posture of organisations and enhancement in the ability of IT systems and networks to resist cyber attacks. 	<ul style="list-style-type: none"> • Govt. and critical sector organizations are implementing the security best practices in accordance with ISO 27001 standard and as per the advice issued by CERT-In. Services of CERT-In empanelled IT security auditors are being used to verify compliance. • A Workshop on Crisis management Plan has been conducted to create necessary awareness among central government Ministries/Departments and State governments and UT governments. Cyber Security Drills to assess preparedness of organizations to withstand cyber attacks are planned. First Cyber security mock drill was conducted in November 2009. • Practical skill tests to verify the competence of CERT-In empanelled auditors is complete and at present 33 organisations have been empanelled. • CC lab accreditation process is complete. The test facility is able to conduct tests up to level 2.
<ul style="list-style-type: none"> • Trained manpower to implement techniques to secure IT infrastructure. • Trained manpower to collect, analyse and process digital evidence. • Pre trained manpower will help in securing cyber space and check cyber crimes. 	<p>Conducted 18 training programmes on Critical Information Infrastructure Resiliency, Wireless Security, Windows Security, Current Trends in Web Application Security, Identity & Access management, Threat Infiltration & Mitigation, Computer Forensics and Advanced Web Application Security. Officials from central & state government Ministries/Departments/ Govt. of Union Territories, PSUs, ISPs Banking/Financial, Judicial/Law enforcement and Critical sector organizations participated.</p>
<p>Development /enhancement of skills and expertise in areas of cyber security</p>	<ul style="list-style-type: none"> • Working Group was reconstituted for a period of two years with experts from Academic/ R&D organisations, Govt and user organisations to provide

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Objectives/Targets	Achievements as on 31-12-2009
	<p>advisory support for implementation of R&D programme.</p> <ul style="list-style-type: none"> • R&D proposals were formulated in the areas of (i) face recognition system for unconstrained environment and (ii) digital signature technologies. • Twenty nine on-going projects were reviewed by the respective Project Review and Steering Committee (PRSG) of the on-going projects and follow up actions have been taken.
Enhancing the security of communications and information infrastructure in the country	<ul style="list-style-type: none"> • Threat Assessment and Attack Detection Solution at ISP Level to facilitate early detection of malicious activities and attacks in Indian networks is functional partially and efforts are in progress to enhance the solution. Project for Augmentation of CERT-In facilities including Vulnerability Assessment & Penetration testing Lab and Artifact Analysis Lab is under process. Process initiated to install a multi-purpose threat mitigation hardware. • Tracking of vulnerabilities in Operating systems, Applications such as Web/Database/Mail and Network devices is ongoing. <ul style="list-style-type: none"> • Security Incident Response-Around 7507 security incidents resolved. • 6209 Indian website defacements tracked. Incident Response and Advice for prevention provided to affected organisations. • 2375 open proxy servers in India were tracked and actions were taken to mitigate the same. • Around 2646746 Bot infected systems and 43 Command & Control servers were tracked in India. • 24 Security alert/ incident notes issued. • 48 Security Advisories issued. • 121 Security Vulnerability notes issued. • Security Bulletins covering various cyber security issues, intrusion trends and defence mechanisms are being published every month. • Cooperating with law enforcement agencies in training their officials as well as extending the support in investigation of cyber crimes.
A legal framework, which will instill confidence of the users and investors in the area of Information Technology in the country will be in place.	The Information Technology Act, 2000 has been amended by the Information Technology (Amendment) Act, 2008. The amended Act has been enforced on 27.10.2009. Rules pertaining to Sections 52, 54, 69, 69A, 69B and 70B(1) have been notified on 27.10.2009. Other rules are being formulated

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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 2009-10 (up to 31.12.2009)

<i>Objectives/Targets</i>	<i>Achievements as on 31-12-2009</i>
<p>Objective: Build-up expert design domains catering to the needs of latest technology. Design and development of application specific systems as per user needs.</p> <p>Target: RF& Microwave communication systems - 2 Nos, Control and communication system - 2 Nos, Atmospheric instrumentation - 3 Nos, Linear accelerators (Medical) - 1, (Industrial) - 1, Sleeve monopole antenna in numbers, High performance patch antennas -5 Nos , High power antenna - 2 Nos, RF dryer- 1 No Research on microwave dryer for identified industry.</p> <p>Development of W band components, Phase locked loop oscillaotr at Ka band, Pulsed power amplifiers in W band.</p> <p>Development of optical signal processing modules to support high-speed processors to be used in communication and radars.</p>	<ul style="list-style-type: none"> • Delivered RF communication system 1 to DRDO, Fire control system to Ordnance Board, SODAR system to IITM, Pune, Industrial Linacs to SHAR and HEMRL. Delivered two numbers of S band TTC transponders to M/s ISAC, Bangalore for use in satellites. High performance antenna to CDAC. The complete software defined radio demonstrated. A novel concept of patch antenna for strategic applications developed and demonstrated. • RF dryer to NE region, Medical disinfection system to Tripura. • Demonstrated Ka band power divider, Frequency multiplier to DRDO. • Compact antenna and DSP based smart antenna

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Objectives/Targets	Achievements as on 31-12-2009
	solution provided for software defined radio.
<p>Objective: To offer test, design validation services to industries.</p> <p>Target: 450 test assignments for EMI/EMC and 10 test assignments for thermal design and analysis Setting up of calibration and reference laboratory to support EMI test instrumentation periodical calibration and open area test site for automobile industry.</p>	<ul style="list-style-type: none"> • Conducted 330 assignments for test and 15 assignments for technical consultancy. • Proposal for setting up EM calibration and reference laboratory has been submitted to DIT.
<p>Objective: Establishment of advanced design and test facilities</p> <p>Target: Establishment of laboratories with expert design pool and sophisticated test and validation facilities.</p>	<ul style="list-style-type: none"> • Civil construction work for EDC centre at SAMEER-Chennai and CATR/MMW development laboratory at SAMEER-Kolkata completed and the installation of CATR completed. • The building for Linac research and development could not be completed and will be completed by March 2010.
<p>Objective: 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.</p> <p>Target: Conducting regular training programmes in the areas of EMI/EMC, Thermal design and antennas. Initiation of conducting M.Tech level programme at Anna University and setting up of Computational Electromagnetic cell at IISc, Bengaluru</p>	<ul style="list-style-type: none"> • Civil construction work for EDC centre at SAMEER-Chennai and CATR/MMW development laboratory at SAMEER-Kolkata completed and the installation of CATR completed. • The building for Linac research and development could not be completed and will be completed by March 2010.

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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 2009-10 (up to 31.12.2009)

<i>Objectives/Targets</i>	<i>Achievements</i>
Upgraded National PARAM Supercomputing Facility	The technical evaluation of External High Performance Storage System of 200TBs [100TB (Scratch) + 100 TB (Home)] with a Tape backup of 400 TB is under progress
HPC Applications on PARAM Yuva	<ul style="list-style-type: none"> • Weather Regional Forecasting (WRF) Code is being run on a regular basis for short range Weather Forecasting of Kerala and Maharashtra. Other codes from the areas of Bioinformatics, Computational Chemistry and Seismic Data Processing are being tested on PARAM Yuva, having PARAM Net III card • Reconfigurable Computer System (RCS): Successfully completed deployment, testing, application level benchmarking alongwith system software on 16 Nodes of PARAM Yuva
Approval and Commencement of Main Garuda	Completed a Feasibility Study of open source Data Grid Solutions for GARUDA; Workshop on Grid Computing conducted at IIAP, Bangalore.
Building R&D infrastructure at Chennai, Delhi, Hyderabad, Pune and Thiruvanthapuram	Superstructure slab concrete for the four floors completed of Thiruvanthapuram building; Slab work for four floors completed for Pune building; Slab work for basement, ground floor, first floor for hostel building at Hyderabad, Process of seeking approval for builder in progress in Delhi
Indian languages software and fonts CDs & Enhanced Multilingual Tools/Fonts for Indian Languages	Indian Language Software Tools and Fonts for Bangla, Konkani, Kashmiri, Sindhi, Manipuri and Santali released for free public distribution on September 8, 2009

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Machine Assisted Translation system for English to Indian languages (EILMT), Indian language to Indian language (ILMT) and Cross Lingual Information Access (CLIA)	<ul style="list-style-type: none"> • EILMT: The web application with Alpha 5.0 version for tourism domain was released in December 2009 for five language pairs i.e English to Hindi, Urdu and Oriya, Marathi and Bangla with the enhanced versions of all the four engines Viz. TAG, AnalGen, SMT and EBMT • ILMT: The machine evaluation of Hindi to Bangla Language pair completed • CLIA: Integrated version of CLIA system has been successfully completed and delivered to STQC • Text to Speech synthesis system in Nepali made available for both Windows and Linux • The Web version of the English to Bangla MAT based on AnglaBharti Technology under the EILMT consortia has been placed for testing
Multimedia Portals, Content Libraries, Album Authoring Software, 3D Visualization & Virtual Reality	Unicode version of Manuscript editor created. Processed manuscript images deployed in Pandulipi Samshodhaka.
Software Define Radio (SDR) prototype	Re-configurable radio, supporting multi-band and multi-standards was developed in collaboration SAMEER, Chennai
Tetra Wi-Max base station prototype	Vehicle mounted Tetra Communication prototype System “DHRUV” deployed on trial basis
Traffic Control System with enhanced features	Mechanical Design Completed; Controller diagnostics software completed for Next Generation Traffic Controller
Power grid with support of additional services	Full Spectrum Simulator: Benchmarking evaluation is under progress by CPRl; National Workshop on Power Electronics (NWPE) 2009 was conducted at Trivandrum
2 MVA STATCOM with Super Capacitor and Real-Power support scheme	Site preparations completed for two STATCOMs
Electronic Nose & Vision System (β version)	Pilot level deployment of ENV System has been increased to 11 nos in the country. Collection of user feedback is going on. Design of a new version of the ENV system is under process.
Integrated Automation at Tea Processing Factory, Agartala.	Proposal still under consideration.
Software as a Service (SaaS) Framework	A detailed study on the architecture of SaaS stack is being undertaken
Enhancements to BOSS Linux	BOSS Linux TVC ready for launch; 90 officials from various Govt. departments, college students and IT@School master trainers attended the Boss Workshop Jointly organised with IT@School, at Ernakulam
Graph Mining Tools	Literature survey and analysis design completed. Prototype development is under progress.

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DSS for Automated Refactoring	Development of Metric Computation tool completed; development of two metrics for suggesting generalization based refactoring completed
e-Governance applications for State Government departments	Development of Works & Accounts Management Information System (WAMIS) for Rural Department, Government of Orissa completed. Go - Live of the project initiated
<p>Geomatics solutions for</p> <ul style="list-style-type: none"> • Forrest Management • Flood Monitoring • Rural Roads 	<ul style="list-style-type: none"> • Development of PWD Online project for Public Works Department, Government of Tripura is in progress. • Pilot testing of enhanced version of KAVERI - BHOOMI integration solution is in progress for Department of Land Records, Government of Karnataka. • GAURI – Stamps & Registration Software for Goa, Statewide rollout started with Second installation at Margao. • SDSS- Queries related to JFM (joint forest management) is developed, connectivity with Google Earth established. • Model deployment system has been designed for redhat enterprise linux for flood monitoring. • India Development Gateway: finalised the CSC clusters in 3 states for piloting the InDG services; Training was organized for the Common Service Centre kiosk operators (APOnline) on InDG utilities and Vyapar.
Development of Next Generation Forensics tools [NeFT]	Evaluation version of CyberCheck V4.0 released. Developed different courses for training using VTE environment
Enhanced Cyber Forensics Tools.	Kerala Govt. inaugurated the Cyber Forensics Analysis and Training Centre, setup for Kerala Police Integrated standalone steganalysis software StegoCheck v4.0 is ready for field trial. StegoCheck has been integrated successfully with CyberCheck.
Face Recognition Engine (FRE).	FRE V4.0 has been developed using texture attributes around biometric landmark points and shape parameters in a face
Malware Prevention System	Implementation of process execution control (PEC) is completed. Generalized solution of Malware Prevention System (MPS) for Windows and Linux operating systems is implemented
DICOM & HL7 Standards Libraries	Under continuous enhancement of Mercury system, Mercury v4.0, MWI v2.0 and MWT v2.0 are under testing at partner sites.
HIS enabled with DICOM & HL7 standards	Work progressing on DICOM & HL7 SDK v2.0 aimed at closing the development line for PS3.0-2004 of DICOM and v2.5 of HL7 fully after including all fixes and enhancements
Distributed EHR Framework	Under Distributed EHR project review of available standards for EHR has been completed. A hybrid cluster for simulation of hardware/software/network resources for building and validating ideas has been conceived

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Medical Image Processing System for Automated PAP Smear screening	MoA signed with Uppsala University under Indo-Swedish Technical Collaboration; Cytology training by RCC in progress; Development of E-Smear Software in progress.
Public Health Information Network (PHIN). compatible outbreak detection and management system	<ul style="list-style-type: none"> • Sanjeevani Mobile Telemedicine Unit completed and handed over to Malabar Cancer Care Society, Kannur. Provided training to users at site. • Trial run of 'e-Dhanwanthari' successfully completed and system is fully functional at 10 centres. • Cure@home: Coding and testing phase of Web version of V1.0 has been completed and packaging of this version is in progress
Main Garuda	NKN migration of Garuda network completed in 11 sites. Architecture, tools and Middleware components are being reworked to improve on operational stability and functionality
Next Generation Supercomputing System at CTSF, Bangalore	Proposal at conceptual stage

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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 & Communication Technology (IECT). 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 2009-10 (up to 31.12.2009)

<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	5,813 (July' 09 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: 1599 students to be trained	1,140
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: 12730 students to be trained	4,687
Training for Short Term Courses of duration less than 1 year Target: 11,168 students to be trained	5,918
ITES-BPO Programme Target: 1500 students to be trained	703
IT Literacy Programme (CCC course) Target: 90,000 students to be trained	88,722 appeared in CCC examination. 66,076 qualified in CCC examination.

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Other Major Achievements of DOEACC

Other major Achievements

- 19 DOEACC Bio-Informatics ‘B’ level qualifiers were awarded M.Sc.(Tech) degree by West Bengal University of Technology(WBUT). Another 51 students are expected to complete the MSc(Tech) by March 2010.
- One candidate awarded PhD (Engg.) by Dr. B.A.M. University out of the 08 candidates registered to avail the research facility undergoing research at DOEACC Centre, Aurangabad.
- DOEACC Centre, Aurangabad signed and MoU for collaborative/ sharing of resources of academic/ research & related services with following organizations:-
 - (i) Marathwada Institute of Technology (Aurangabad).
 - (ii) Confederation of Marathwada Industries and Agriculture (CMIA).
- DOEACC Centre, Chandigarh has developed and implemented following IVRS systems for various departments:-
 - (i) Developed and Implemented system for National Rural Health Mission for capturing information on female feticide and gather information about various immunization/ health services provided.
 - (ii) Developed and Implemented system for Department of Water Supply and sanitation, Punjab to facilitate villagers to register their complaints regarding water supply (Quality and Adequacy).
 - (iii) Developed software for U.T. Administration, Chandigarh for registering complaints of various Engineering & Environment related departments.
- DOEACC Centre, Gorakhpur has launched website <http://eshiksha.edu.in> for web based education.
- DOEACC Centre, Gorakhpur has developed course material for “Training of Teachers in e-learning” and hosted on the web-site.
- DOEACC Centre, Kolkata is engaged in processing & tabulation work for the entire country with respect to VIth Agricultural Census 2005-06 and VIIth Input Survey 2006-07. Around 10 crore data records are being prepared from Census/ Survey schedules and compiled for generating agri-statistics on land usage, extent & source of irrigation, live stock, usage of input (like fertilizer, manure etc.).
- DOEACC Centre, Kolkata is processing for Recruitment Examination including Answer Script Evaluation using self developed image-processing application software mainly for recruitments in Govt. since 2002. States like West Bengal, Tripura & Meghalaya and also some other states & Central Govt. agencies are engaging the Centre for such work. The Centre is processing for recruitment of around 17 lakh (approx.) candidate (in total).
- DOEACC Centre, Calicut has entered into tie-up with Kerala State IT Mission to launch 12 training programmes under DOEACC Skill Certification Scheme (DSCS) in IT and Multimedia through Akshaya Centres all over Kerala.

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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 2009-10 (up to 31.12.2009)

Targets	Achievements
<p>To promote exports of electronics & IT</p> <p>This program is for promotion of exports and provide 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> <ul style="list-style-type: none"> a.) Incubation Day: STPI Bangalore had organized Incubation Day on 25th Sept, 09 to provide valuable guidance and support through export talk to nurture entrepreneurs. b.) Organized Interactive Meet with Mr. Sachin Pilot, Minister of State, MCIT: STPI Bangalore had interactive meet on 1st Aug, 2009 in Bangalore, around 40 to 50 STP units participated in this event. c.) Women in IT: STPI Bangalore had an interactive meet on 19th Aug, 2009 with women IT executives, to empower women in IT. d.) Co-Hosted Bangalore IT.Biz <p>STPI Bangalore along with DIT, Government of Karnataka initiated IT.Biz 2009 as a Co-Host. With its focal theme 'ICT for a Billion People' the 3 day event addresses all those key Industry verticals which will drive the growth of the Country and create immense opportunities for ICT sector within India.</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 2009-10 (up to 31.12.2009)

<i>Area/Projects & Physical Targets</i>	<i>Achievements</i>
<p>Integrated Electronics Packaging: Process for Integrated Glass-Ceramic Packaging</p> <p>Target: Development of UBM for lead-free materials and Optimization of electroplated bumps</p>	<p>Electroplated bumps of Sn-Ag-Cu with 25μm dia and 75μm pitch prepared. A UBM consisting of electroplated Ni and Cu used. Optimization of bump formation process is in progress.</p>
<p>Nanomaterials and devices: Generation of Nano-powders, Nanocomposite & Quantum dots of metals/semiconductors for Electronics Technology and allied applications</p> <p>Targets:</p> <ul style="list-style-type: none"> • Initial Trials and optimization to obtain sub micron/ nano particles of ZnO, ZrO₂ & TiO₂ in a Transferred Arc Plasma Reactor • Optimization of CdSSe glass nanocomposite with respect to absorption edge cut off at 600-630nm. • Preparation of organometallic/ inorganic precursors and process development of passivated free standing QDs of Cu₂Se Ag₂Se and TiO₂ • Development of Zn-Sn-O and Cd-Sn-O thin films • Nanomaterials based thick film sensors 	<ul style="list-style-type: none"> • Nanopowders of Aluminum were synthesized by TAPR at different power (250-300 A) and chamber pressure and characterized by SEM, EDX and AFM and XRD. • XRD for oleic acid capped CuSe nanocrystal sample shows the formation of mixture of phases. • Based on preliminary. results for the formation of Ag₂Se nanocrystals (average size 10-20 nm and Ag:Se ratio 2:1), further experiments executed by variation of surfactants and temperature. • Optimised homogeneous and bubble free CdSSe doped glass nanocomposite. The absorption cut off for the same is 620 nm • Nanosized NTC powder was prepared through SHS method • The reliability studies indicated that out of the five NTC thermistor compositions(B values 3250 K, 3690 K, 3850 K, 3977 K and 4252 K), four exhibited reliability within the tolerance limit of <math>\pm 1.0\%</math> whereas one showed + 1.5 % change in the resistance value, on aging at 120^oC for 7

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Area/Projects & Physical Targets	Achievements
	<p>days.</p> <ul style="list-style-type: none"> Prepared stable precursor solution for fabricating zinc tin oxide thin films by spin coating and initiated the coating of transparent films using the precursor solutions.
<p>Ultra high purity materials: Process technology/Pilot plant scale production of ultrapure metals</p> <p>Targets:</p> <ul style="list-style-type: none"> Testing and preliminary experiments to produce tantalum, niobium and titanium nanoparticles Experimental runs on Vacuum refining/ zone-refining system of gallium. Purification of Zn (6N-7N) Bismuth ingot preparation and crystal growth Establishment of Nano powder synthesis facility for refractory metals based on sodium flame encapsulation process 	<ul style="list-style-type: none"> 7N pure Ga achieved. 6N pure Zn produced by multiple vacuum distillations. Specifications of process equipment for Bi frozen. Trial zone refining expts on 4N pure Bi were carried out to obtain ultrapure Bi. Hydrogen reduction of tantalum chloride conducted
<p>Materials for Renewable Energy: Process for renewable energy material.</p> <p>Target: Preparation of carbon aerogel based electrodes for super capacitor applications</p>	<ul style="list-style-type: none"> Prepared RF gels using Ni-acetate (instead of Na_2CO_3) as the catalyst and electrodes with thickness of 100-150 μm. The electrical conductivities were found to be increased with increasing Ni-content. Prepared carbon aerogel based electrodes using selected carbon aerogel composition and studied their electrical properties.
<p>Piezo sensors and Actuators: Process/ technology for sensors and actuators</p> <p>Targets:</p> <ul style="list-style-type: none"> Development of device quality piezoelectric films on Silicon substrates Unimorph actuator of targeted specifications. 	<ul style="list-style-type: none"> Unimorph actuators fabricated. Highly-crystalline, crack-free and dense PZT Thin-films have been achieved. The PZT thin-films exhibited excellent dielectric characteristics with a relative permittivity, ϵ_r of 1072 and $\tan \delta = 0.02$. Optimization of piezo to non-piezo layer thickness is under progress.

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6.2.6 Education & Research Network (ERNET) India

Education & Research Network (ERNET), India is a Society of the Department of Information Technology with its activities organized around five technology focus areas: National Academic and Research Network; Research and Development in the area of Data Communication and its Application; Human Resource Development in the area of High-end Networking; Educational Content; and Campus-wide High Speed Local Area Network. All the five areas have contributed significantly in the growth of ERNET India. The innovations and breakthrough achieved through these areas, represent the core strengths of ERNET. ERNET has been working to ensure that end-users enjoy the best experience and satisfaction. The architecture of the Network is designed to deliver broadband value added service and applications like Web casting, IPcasting, Digital Library and Distance Learning. ERNET India is in a position to connect any institution anywhere in the country on its backbone to share resources and undertake collaborative research and applications. The ERNET Backbone is IPV6 enabled.

Targets and Achievements during the year 2009-10 (up to 31.12.2009)

Targets	Achievements
Upgrading the technology and capacity of ERNET Network.	Process for upgradation initiated. Increase of aggregate Internet bandwidth has been completed.
Enhancing bandwidth of existing link to GEANT2 Network in Europe and extending external connectivity to South Asia through TEIN3 Programme.	GEANT2 connectivity upgraded to 175 Mbps. TEIN3 PoP co-location at ERNET PoP in Mumbai completed. 2.5 Gbps links to Europe and Singapore under testing.
Setting up of ERNET PoP in the North East.	Project Proposal submitted to DIT for setting up additional PoP in the North-East.
E-linkage of 200 KVKs under ICAR.	ERNET has setup a dedicated VSAT Network with Hub and NOCC at ICAR, New Delhi. Remote VSAT has been installed at 188 KVKs across the country.
Setting up of secure Data Centre to host education related material for research institutions of ICAR.	Project proposal submitted to World Bank.
Connecting 100 more schools under NVS and enhancing Internet bandwidth of UGC Infonet users.	97 schools have been connected under NVS-Net Phase-III. The bandwidth of 137 Universities covered under UGC-Infonet has been upgraded.
Establish additional 100 ICT vocational centres for Skill creation for the Disabled children.	Process for deployment of special tools and equipment for the children with disabilities has been initiated.
R&D initiative in Networking	EU funded research projects under FP7 in progress (BELIEF-II and 6 Choice). IPv6 related research projects through funding from DIT initiated (Mobile IPv6).

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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 2009-10 (up to 31.12.2009)

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: (1) ICT EXPO 2009, Hong Kong, during April 13-16, 2009 (2) COMMUNIC ASIA 2009, Singapore, during, June 16-19, 2009 (3) GITEX DUBAI, Dubai during October 18-22,2009 (4) PRODUCTRONICA 2009,Germany during November10-13, 2009 (5) OUTSOURCE WORLD,NEW YORK, USA during November 11-12, 2009 (6) CeBIT 2010, Hannover, Germany during March 2-6,2010
India Soft 2010 and Its Road Shows:	The INDIASOFT 2010 will be held at Jaipur, Rajasthan during March 10-12, 2010. The Road shows for the event were organized at different places with in India including Jaipur, Pune, Hyderabad, Bangalore , Chennai etc .
Publications: The Council has planned to bring out some publications etc.	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.
Participation in delegations abroad: The Council has planned to participate in some delegations abroad.	The Council organized some delegation visits abroad- DELEGATION VISIT TO COLOMBIA (November 9-10, 2009) DELEGATION VISIT TO USA (12 th November, 2009) DELEGATION VISIT TO KENYA & TANZANIA (30 th Nov – 5 th Dec, 2009)

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Incoming Delegations	H.E. Minister Eddy Martinez, Executive Director of Centre for Export & Investment Promotions & Mr. Domingo Tavarez, General Director, Presidential Office of Information, Technology & Communication along with a business delegation from Dominic Republic visited ESC with an objective to enhance ICT cooperation between the two countries
EXPORT FACILITATION AND BUSINESS SUPPORT CENTRE (EFBSC)	<p>The Council launched it's second Export Facilitation and Business Support Centres (EFBSC) in Fairfax Virginia USA under the Market Access Initiative (MAI) Programme of Department of Commerce, Government of India on 8th June 2009.</p> <p>The 5 member companies started reaping benefits of this Council's Export Facilitation and Business Support Centre (EFBSC) in USA include:</p> <ul style="list-style-type: none"> • CCS TECHNOLOGIES PVT LTD, COCHIN • SYMBIOSIS TECHNOLOGIES, VIZAG • VISHNU, SOLUTIONS PVT LTD, KOLKATA • ZANSYS, NEW DELHI • ZERO ONE SYNERGY PVT. LTD, LUDHIANA