

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. So far seven CAs have been licensed by the CCA under the IT Act, 2000.

Target & Achievements during the year 2007-08

| Target | Achievement |
|--|---|
| 1. The provisions of the IT Act will continue to be implemented in respect of licensing of Certifying Authorities and exercising supervision over the activities of Certifying Authorities. | 1. Examination of Audit Reports changes to CPS and addressing CA & user concerns done during the year. |
| 2. Operations will be continued at the primary site in New Delhi for the root Certifying Authority of India (RCAI) and the National Repository of Digital Signature Certificates (NRDC) and at the Disaster Recovery site for the RCAI at C-DAC Bangalore. | 2. RCAI & NRDC operations carried out throughout the year for providing a service & trustworthy PKI in the country. |
| 3. Interaction and coordination with user agencies will be given special attention, for digital signatures with their applications with special focus on E-Governance applications. | 3. Interaction & Coordination primarily carried out with various agencies. |
| 4. Enhance activities in the Cyber Forensics Laboratory to include Network Forensics. | 4. Could not be done due to lack of manpower. |

6.1.2 Cyber Regulatory Appellate Tribunal (CRAT)

Government of India enacted the Information Technology Act, 2000. Section 48 (1) of this Act provides for establishment of one Appellate Tribunal to be known as Cyber Regulation Appellate Tribunal (CRAT). Any person aggrieved by an order made by Controller of Certifying Authorities or by an Adjudicating officer under the IT Act may prefer an appeal before the Cyber Appellate Tribunal having jurisdiction in the matter. This Tribunal is headed by a Presiding Officer who is appointed by the Central Government by Notification as provided in Section 49 of the IT Act, 2000.

The Tribunal has started functioning.

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6.1.3 Semiconductor Integrated Circuits Layout Design Registry (SICLDR)

Semiconductor Integrated Circuits Layout-Design Registry (SICLDR) has been established for receiving IPR applications and granting Registrations to qualifying cases. The Registry will have jurisdiction all over India. The Registry is to receive IP Registration applications, make determinations on the ones eligible for Registrations and grant Registrations. The Registry is headed by Registrar appointed by Government as per section 3(1) of the Act.

| Target | Achievement |
|--|---|
| 1. Creating Infrastructure for filling and protection of Semiconductor IC Layout Design IPs. | Setting up of a new front-end main office of SICLDR was completed. The two Registry resources i.e. Data Center and Inspection and Verification facilities seeded and procurement actions initiated. |
| 2. Diffusion of Semiconductor Layout-Design IPR matters. | Two technical talks on Semiconductor IP Registration delivered at Bangalore and Nagpur. |
| 3. Seeding of National IPR Institute for Layout Designs for undertaking various Semiconductor IP related activities. | Deferred due to non provision of funds. The facility envisaged by DIT has been recommended as mission programme by DIT Study Team on R&D for XI Plan. |

6.2 Societies /Autonomous Bodies

6.2.1 Society for Applied Microwave Electronics Engineering and Research (SAMEER);

SAMEER is a society of the Department of Information Technology with a broad mandate to undertake R&D work in the areas of RF/Microwave Electronics, Electromagnetic Technology and its related areas. At present SAMEER has three Centres – one each at Mumbai, Chennai and Kolkata specializing in the areas of RF & Microwaves, Communication, EMI/EMC, Antenna & Millimeter wave technology respectively. Status of activities upto 31.03.2007 and as on 31.12.2007 is given below:

SAMEER-Achievements upto 31.03.2007

| Sr. No | Name of Scheme/ Programme | Objective/ Outcome | Outlay 2006-07 (Rs. in crore) | | | Quantifiable Deliverables/ Physical Outputs | Projected Outcomes | Processes/ Time basis | Status as on 31.03.2007 |
|--------|---------------------------|---|-------------------------------|-------------|-----------|---|--|-----------------------|---|
| | | | Non-Plan | Plan Budget | Comp IEBR | | | | |
| 1. | SAMEER | R&D in Microwave Engineering and Electromagnetic Technology, Radar, RF Communication, | 3.00 | 22.00 | 13.00 | <ul style="list-style-type: none"> Digital Signal Processing Infrastructure - A state of art DSP lab catering to current technologies like FPGA/DSP will be set up | The infrastructure will be utilized for various activities undertaken as signal processing is one the key areas of Radar & communication applications. | March 2007 | Activity completed . The infrastructure created for various activities undertaken as signal processing is one of the key areas of Radar |

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| Sr. No | Name of Scheme/ Programme | Objective/ Outcome | Outlay 2006-07 (Rs. in crore) | | | Quantifiable Deliverables/ Physical Outputs | Projected Outcomes | Processes/ Time basis | Status as on 31.03.2007 |
|--------|---------------------------|---|-------------------------------|-------------|-----------|--|--|--------------------------------------|--|
| | | | Non-Plan | Plan Budget | Comp IEBR | | | | |
| | | High Voltage Electronics and Electromagnetic interference | | | | <ul style="list-style-type: none"> • Multi-ridge wave guide horn Antenna - A wide band multi octave horn antenna will be designed • Differential phase shift Circulators - A high power four port S-band ferrite circulator capable of handling 6 MW pulse power and 5 KW average power will be delivered. | <p>This antenna will be used for characterization of all antennas for various applications.</p> <p>Linac for medical & radiography will use indigenously developed circulator replacing imported one.</p> | <p>March 2007</p> <p>Dec 2006</p> | <p>and Communication applications.</p> <p>DSP/FPGA subsystem for FCS, FH and system controller for Linac completed.</p> <p>A digital correlator was realized using ACCTE 4 millions gate FPGA</p> <p>Simulation of antenna radiation pattern over multi-octave frequency band completed and bandwidth three times more than the normal ridged waveguide/ horn antenna achieved. Activity completed.</p> <p>Integrated & tested for high power and medical linacs (3 MW Peak & 3 KW average power).</p> <p>Activity completed. 4 more nos. of circulators planned. Engineering drawings and technology document prepared.</p> |

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|--------|---------------------------|--------------------|-------------------------------|-------------|-----------|--|--|---|--|
| | | | Non-Plan | Plan Budget | Comp IEBR | | | | |
| | | | | | | <ul style="list-style-type: none"> • High power Amplifier - A 16 KW pulse transmitter will be developed with 10% duty cycle. • X-band Klystron Amplifier source for VECC, Kolkata - The system will be designed and fabricated. • Technical Assistance to L& T for C& S band Transmitter - The high power transmitter will be developed • Jai-Vigyan Medical linac machine - The second machine will be installed and commissioned at Cancer Institute Adyar Chennai | <p>The transmitter will be used in the new wind profiler for meteorological applications</p> <p>This indigenisation effort will make country self sufficient in the area of particle research.</p> <p>The system with advanced features will be available for tracking of satellites.</p> <p>With operation of this machine 10,000 patient exposures will be possible annually</p> | <p>March 2007</p> <p>March 2007</p> <p>Dec 2007</p> <p>Sept. 2006</p> | <p>Final high power amplifier has been fabricated. Integration and rack wiring is in progress. Activity will be completed by May 2007.</p> <p>All the components have been procured. Integration has been initiated. klystron and DRO awaited from User agency</p> <p>Control and interlocks using FPGA and PLC based instrumentation have been tested in the prototype transmitter.</p> <p>Likely date of completion of MW C band and S band transmitter (one each) in the engineered version is Sept. 2007 & January 2008 respectively.</p> <p>QA & ATP report has been submitted to Linac QA & ATP internal review committee at SAMEER, Mumbai. The assessment by the committee is under progress. Base frame grouting and leveling work is completed at Cancer Institute, Adyar, Chennai. The machine is ready for dispatch,</p> |

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|--------|---------------------------|--------------------|-------------------------------|-------------|-----------|---|--|-----------------------|---|
| | | | Non-Plan | Plan Budget | Comp IEBR | | | | |
| | | | | | | <ul style="list-style-type: none"> Design of system and software for collection of EM signature for digital equipment - Design and development of system and software for the collection of Electromagnetic signature for various digital equipments | A data base containing EM signature will be made available to system analysis group of DRDO, RAW, Forensic Lab | Dec. 2006 | <p>awaiting clearance from internal review committee. Cancer Institute, Adyar, Chennai has indicated that civil construction work of treatment room is in progress.</p> <p>Successfully demonstrated and Activity completed</p> |

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| Sr. No | Name of Scheme/ Programme | Objective/ Outcome | Outlay 2007-08 (Rs. in crore) | | | Quantifiable Deliverables/ Physical Outputs | Projected Outcomes | Processes/ Time basis | Status as on 31.12.2007 |
|--------|---------------------------|---|-------------------------------|-------------|-----------|--|---|---|--|
| | | | Non-Plan | Plan Budget | Comp IEBR | | | | |
| 1. | SAMEER | R&D in Microwave Engineering and Electromagnetic Technology, Radar, RF Communication, High Voltage Electronics and Electromagnetic interference | 3.00 | 22.00 | 14.00 | <ul style="list-style-type: none"> ● Radio Theodolite 1680 MHz is used to track automatically the weather balloons fitted with the 1680 MHz transmitter to acquire weather data. ● Digital Radiosonde- this microcontroller based unit digitizes pressure, temperature and humidity sensor output and feeds it to onboard telemetry system for transmission to ground receiver. ● Signal conditioning card for Ozone Sonde . This card alongwith balloon filled with hydrogen is released for recording upper air ozone concentration. ● Estimation of Precipitable Water Vapour (PWV) using dual frequency GPS ● Technical assistance to L&T for C and S-band transmitter – The high power | <p>The system will be demonstrated to IMD at one of its Upper Air Monitoring Stations</p> <p>The digital RS will be utilized by IMD for taking Upper Air Meteorological observation</p> <p>Ozone Sonde will be used by IMD to monitor ozone profile of upper atmosphere</p> <p>This software can generate PWV for use in numerical weather forecasting & climatological studies.</p> <p>The system with advanced features will be available for</p> | <p>December 2007</p> <p>March 2008</p> <p>March 2008</p> <p>October 2007</p> <p>December 2007</p> | <p>System has been integrated. GUI developed and testing is in progress.</p> <p>Onboard transmitter with antenna developed and tested. Signal conditioning card development in progress.</p> <p>Hardware developed and tested. Software being developed and tested.</p> <p>The software development for near-real time estimation of Precipitable water vapour (PWV) is complete. Activity completed.</p> <p>Factory Acceptance Test has been conducted.</p> |

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| Sr. No | Name of Scheme/ Programme | Objective/ Outcome | Outlay 2007-08 (Rs. in crore) | | | Quantifiable Deliverables/ Physical Outputs | Projected Outcomes | Processes/ Time basis | Status as on 31.12.2007 |
|--------|---------------------------|--------------------|-------------------------------|-------------|-----------|--|--|--|--|
| | | | Non-Plan | Plan Budget | Comp IEBR | | | | |
| | | | | | | <p>transmitter will be developed</p> <ul style="list-style-type: none"> • High power test bench for Linac – A high power microwave test bench will be set up • Fiber Optic Gyroscope (FOG) • Sapphire window for high power microwave and mm wave applications • Establishment of Compact Antenna Test Range (CATR) facility | <p>tracking of satellite</p> <p>A microwave test bench will be created for testing Linac and microwave components at 2998 MHz at 6 MW upto 25 KW power.</p> <p>Fiber Optic Gyroscope, a sensor is used in the guidance of aircrafts, missiles, ships and other strategic areas</p> <p>Sapphire to metal joining technique will be developed. Ultra high vacuum compatible microwave window will be made operational at 2998 MHz and will be heat & pressure cycled, and characterized at low power for VSWR & insertion loss</p> <p>CATR facilities at SAMEER will provide basic infrastructure for design, development and R&D in the field</p> | <p>March 2008</p> <p>December 2008</p> <p>December 2007</p> <p>June 2009</p> | <p>Paper design completed. Assembly of components in modulator rack is commenced.</p> <p>Lab prototype using discrete fiber optic components has been completed. The FOG was tested using coils of varying fiber length.</p> <p>Developed sapphire to metal joining technique. Bond strength of 50 MPa has been achieved. Also developed machining techniques for straight cutting, thickness reduction and diameter making of sapphire components using diamond grinding. Activity Completed</p> <p>Construction of CATR complex under progress</p> |

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|--------|---------------------------|--------------------|-------------------------------|-------------|-----------|--|---|---|--|
| | | | Non-Plan | Plan Budget | Comp IEBR | | | | |
| | | | | | | <ul style="list-style-type: none"> • Establishment of facility for batch fabrication of Linear Accelerator (LINAC) tube and Accelerator machine at Khargar, Navi Mumbai • Establishment of a Center for Computational electromagnetics with latest CAD tools and expertise to analyze multi-radiating systems on board. This will be a facility with expertise in large-scale multi radiating system analysis programmes | <p>of antennas, radar cross section studies and radome measurements.</p> <p>This facility will be used for batch fabrication of LINAC tube, System integration of LINAC machine and Radiation testing .</p> <p>Full establishment of CEML with all the tools and infrastructure & training on Software packages</p> | <p>November 2008</p> <p>December 2008</p> | <p>Construction of phase I and phase II buildings is in progress. Procurement of equipments in progress.</p> <p>Analysis of wire antennas and wire arrays in fixed platforms is being carried out.</p> |

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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. Of special relevance to C-DAC are innovation and development of solutions impacting larger public interest. Status of activities upto 31.03.2007 and as on 31.12.2007 is given below

C-DAC-Achievements upto 31.03.2007

| Sr. No | Name of Scheme/ Programme | Objective/ Outcome | Outlay 2006-07 (Rs. in crore) | | | Quantifiable Deliverables/ Physical Outputs | Projected Outcomes | Processes/ Time basis | Status as on 31.03.2007 |
|--------|---------------------------|--|-------------------------------|-------------|-----------|--|---|---|---|
| | | | Non-Plan | Plan Budget | Comp IEBR | | | | |
| 2. | C-DAC | <ul style="list-style-type: none"> • High Performance Computing (HPC) & Grid Computing • Indian Multilingual Computing Software • Software Technologies • Electronics <ul style="list-style-type: none"> – Broadband & Wireless – Power Electronics – VLSI & Embedded Systems – Real Time Systems | 3.00 | 64.50 | 100.00 | <p>High Performance and Grid Computing</p> <ul style="list-style-type: none"> • 10 Gbps interconnect – completion of design and building • Cut-over of 5 Teraflop System • Installation and beginning use of Param Padma, 5TF System • Completion of first phase Garuda (National Grid Computing initiative) and commencement of second phase of PoC • Move to Main Garuda – preparation of project report for Main Garuda • Demonstration of Grid-Enabled applications | <ul style="list-style-type: none"> • Strategic initiative to protect India against denial of advanced and critical technologies in HPC systems. • Facilitate high-end research in science and engineering of HPC support to users. • Demonstrate impact of Grid Computing as of next generation of e-Science/Cyber infrastructure for providing new type of problem-solving environment / collaboration tools • Build capability in emerging applications of Grid infrastructure for global competitiveness | <p>Internal review (Dec 2006)</p> <p>2nd Quarter July–Sept 2006</p> <p>Through out the year;</p> <p>Regular PRSG review (Q1-Q4 or approval)</p> <p>Ist Quarter</p> <p>Last Quarter</p> <p>Review by PRSG Quarterly Apr, July, Oct</p> | <p>10 Gbps Interconnect :</p> <ul style="list-style-type: none"> • 10 Gbps Interconnect Design completed • Switch: PCB layout, design completed, order placed. • NIC : PCB layout & design under progress • Firmware development under progress for UDAPL & OPEN IB standard interface <p>Next Generation 5 TF System :</p> <ul style="list-style-type: none"> • Overall system Architecture & Design finalized • Compute Nodes: Tender released. Evaluation & comparison of technical bids under progress. • Storage: Architectural design specifications & configuration finalized. Preparation of tender document under progress. |

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|--------|---------------------------|--------------------|-------------------------------|-------------|-----------|---|--------------------|--|-------------------------|
| | | | Non-Plan | Plan Budget | Comp IEBR | | | | |
| | | | | | | | | <ul style="list-style-type: none"> • Site preparation under progress • BRAF: Software procurement has been completed and the hardware procurements are in the final stages. Manpower recruitment has been partially completed. Project milestones are on schedule. • A workshop was conducted at Bangalore to Grid Partners on developing applications for Garuda • Param Padma at C-DAC Bangalore has been upgraded to additional one Teraflop making total computing power is 2 Teraflop. • Prototype demonstration on disaster management on Garuda has been completed. • Grid middleware tools covering access portal, Grid Monitoring, Program development, data grid functionality & grid scheduling has been developed and deployed • Punjabi, Urdu, Kannada, Malayalam, Assamese , Marathi & Oriya CDs are launched in January 2007 | |

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|--------|---------------------------|--------------------|-------------------------------|-------------|-----------|--|---|--|---|
| | | | Non-Plan | Plan Budget | Comp IEBR | | | | |
| | | | | | | <p>Multilingual Computing & Allied Areas</p> <ul style="list-style-type: none"> • Release of Indian language CDs • OTF for Indian languages • OCRs for Indian Languages • Multilingual Corpora • Text to Speech Synthesis (TTS) for Indian Language • Commencement of R&D projects in OCR, machine aided translation, cross lingual information retrieval | <ul style="list-style-type: none"> • Development of local language base for IT to enable its large-scale deployment and use by masses. • Development and use of content in major Indian languages and automatic content generation from one language to another to enable use of IT by masses. • New R&D initiatives in areas of speech technologies and machine-assisted translation to proliferate use of IT in the country. | <p>Development of tools, fonts and release - 1 language every 2 months</p> <p>Community participation - Progressive collection on quarterly basis</p> <p>1 language per quarter with acceptable quality</p> <p>Project formulation and approval, atleast 25% work to complete in the year.</p> | <ul style="list-style-type: none"> • Language tools CDs are being distributed • OCR for traditional Malayalam Script: Integration Testing is in progress. • Speech Corpora project at advanced stage of completion, for Malayalam, Tamil & Telugu languages. • System Requirement Study (SRS) for the EILMT, IL-IL MT & Cross Lingual Information Access (CLIA) project has been prepared and submitted • Corpus collection, analysis is in progress • Few modules for CLIA has been developed and are currently under testing phase. • Speech Corpora for Assamese, Bengali and Manipuri completed and released. • Machine aided Translation project in consortia mode-started |

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| | | | Non-Plan | Plan Budget | Comp IEBR | | | | |
| | | | | | | <p>Power/Agri/ Strategic Electronics, Real-Time/Embedded Systems and VLSI Design</p> <ul style="list-style-type: none"> ➤ Designing tools and components for: <ul style="list-style-type: none"> • Power distribution • Power Supply Modules • Energy Meters • Remote Inspection Device ➤ Agro electronics <ul style="list-style-type: none"> • To built first prototype for Real Time, Online quality estimated systems for Food and Agro products and Automation of Post harvest Processing. ➤ Real-time systems, Embedded System & VLSI Design <ul style="list-style-type: none"> • Low voltage Embedded Real time Control for 3 Wheelers • Sensor Network • Embedded Systems for Multilingual and industrial application & next generation Controllers • Hearing aids | <p>To strengthen national capability in Power Electronics and associated areas</p> <p>To develop technologies for Real-time, high-speed Digital Controllers and Power Semiconductor devices for power quality Improvement electric traction, pollution free vehicles, automotive electronics, non-conventional energy sources, remote controlled vehicles, energy efficient power supplies and drives, and so on.</p> <p>To strengthen India's capabilities in Sensor Network and Embedded Systems</p> | <ul style="list-style-type: none"> • On current R & D and Deployment • Quarterly verifiable deliverable • Improvement in deployed systems and associated processes/ components – Quarterly • Development of Istrsion and pilot deployment - Oct 2006 Larger deployment: Jan – Mar 2006 | <ul style="list-style-type: none"> • Developed single-phase compensator. ToT activities initiated • IGBT gate driver developed. Certification testing in progress. • Hybrid-3 wheeler electric vehicle developed. Under field trail and certification. • CAN Controller for automotive applications developed and got deployed in a Hybrid Electric Vehicle. • Grid interactive solar inverter developed • Electronic Nose & electronic vision for Tea quality assessment –Final product design in progress. • Further integration of Tea enterprises using wireless sensor network is in progress • Development of electronic tongue is in progress • Development of low voltage embedded control for three wheeler : Prototype 1 completed and sent to KAL for new Engine fitment • Development of High sensitivity Hearing Aid completed and is undergoing field trials. |

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| | | | Non-Plan | Plan Budget | Comp IEBR | | | | |
| | | | | | | <p>Cyber Security</p> <ul style="list-style-type: none"> • Security tools and technologies for <ul style="list-style-type: none"> - Network Forensics -Cyber Security -Cyber Forensics • Algorithms for Stegnography • Stegnography – To continue work in respect of retrieval of information from Video • Intrusion Detection System • Cryptanalysis: Development of Algorithms and High Performance Computing Technologies | <p>To build country's strength in cyber security to address</p> <ul style="list-style-type: none"> • Export restrictions on security products by advanced countries. • Confidence building in veiled security threat. • Creation of knowledge among people. | <ul style="list-style-type: none"> • Focus on deployment pilots: 1st half • More development: 2nd half • Submission for test to PRSG– Dec'06 • Prototype by Nov – 07 • Initial deployment in NIC, strategic users: 1st half 2006-07 Patent filing, deployment : 2nd half Denial of service and algorithm devp and prototyping: May-Aug'06 Demo Nov'06 Scaling up : March 2007 1st set of PoC deployment in field in 2-3 areas – Sept'06 Remaining- | <ul style="list-style-type: none"> • Sub-10K PC project Spec study and Evaluation is completed. D • Development of Browser Based, Open Standard, Interoperable Set Top Box is completed for field testing <ul style="list-style-type: none"> • Detailed design for hardware tools in advanced stage • CyberCheck 3.0 officially released by Hon Union Minister Thiru Dayanidhi Maran on 6th March, 2007 • Cyber Investigator – Log Analyzer Tool ready for release • Windows CE PDA forensics tool will be released in May 2007 • Algorithms and High Performance computing for cryptanalysis is in final stage • BOSS- GNU/Linux distribution (English ver) ver 1.0 ready & was released during Elitex 2007 |

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| | | | Non-Plan | Plan Budget | Comp IEBR | | | | |
| | | | | | | <p>Open Source Software (OSS) and ICT Applications including e-Governance</p> <ul style="list-style-type: none"> OSS tools for various disciplines of C-DAC's activities such as security solutions, e-Learning solutions, e-Governance applications and HPC systems Standards and component based service architecture for OSS tools Content creation and search tools for Digital Library for Indian Heritage | <ul style="list-style-type: none"> This would help reduce investments in software purchase by developing OSS for various disciplines and promoting their usage. To develop and deploy e-Solutions, which promise improved transparency, speedy information dissemination, higher administrative efficiency and improved public services. To participate in central, state and local e-Governance programmes | <p>March 2007 1-2 scaled up version - March'07</p> <p>Set up Expert Committee under NRC-FOSS - Oct., 2006</p> <p>1st version deployment - Dec 2006</p> <p>1st version - March 2007 2nd version - Dec 2006 Design documentation - Sept 2006 - Nov 2006</p> | <ul style="list-style-type: none"> BOSS Linux desktop – Tamil/Hindi ready Setting up of BOSS Linux Support centre – project approved by DIT BOSS Linux deployed at DIT. Trained 300 officials MOU signed with INTEL, FSG, SATYAM, OSSRC(IBM) Development of Open Source Software – ABHIGYAN for Desktop Applications is in progress. |

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| | | | Non-Plan | Plan Budget | Comp IEBR | | | | |
| | | | | | | <p>Broadband, Wireless and Internet Technologies</p> <ul style="list-style-type: none"> • Development of software defined radio equipment • Enhancement of TETRA technology • Wireless protocols and communication systems and smart antennas. <p>Geomatics</p> <p>Development and Deployment of GIS enabled solutions for</p> <ul style="list-style-type: none"> • Land Records Management, • Urban Infrastructure Management • Natural Resource Management | <ul style="list-style-type: none"> • To be a National Centre of Excellence in Digital Broadband & Wireless Systems • To enable Leadership in R&D for technology development. <p>It would strengthen the core competency and build up additional GIS based solutions.</p> | <p>Pilot deployed - March 2007 1st milestone as per PRSG approval - Feb 2007</p> | <ul style="list-style-type: none"> • Software Defined Radio: Project initiation activity in progress • Two base stations of Tetra Network for Kerala State Police using Compact Tetra Base Station are completed • Export of TETRA Protocol Stack Software for Mobile Stations to UK continued, to China added • GSM (SMS) Integration and Testing with WSN for remote access • Bluetooth and WiFi Integration and Testing with WSN for local access • Speech Recognition sub-system Integration and Testing <ul style="list-style-type: none"> • Mapping of Maharashtra and Goa completed • Landuse / Landcover mapping for Bihar and part of U.P. project is in progress • Glacier Inventory Mapping project – in progress |

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|--------|---------------------------|--------------------|-------------------------------|-------------|-----------|---|---|--|---|
| | | | Non-Plan | Plan Budget | Comp IEBR | | | | |
| | | | | | | <p>Health Informatics</p> <ul style="list-style-type: none"> • Deployment of Telemedicine in Tamilnadu, Himachal Pradesh and other States. • HR Portal for health services in Kerala • Enhancement of features of the following products <ul style="list-style-type: none"> – Mercury – Senjivani – Sushrut | <p>Establishment of telemedicine networks in the country and building technical strengths in BioInformatics / Medical Informatics</p> | <p>At 10 locations in HP – Dec'06 10 locations in Tamilnadu – March '07 – Sept 2006 Version 2.0 – Sept 2006 Version 2.2 – March 2007</p> | <ul style="list-style-type: none"> • Urban mapping of 3 Municipal Corporations of U.P., viz., Mau, Ferozabad and Shahjahanpur project in progress • Closure Report has been filed for main Telemedicine project • Closure report has been filed North East Telemedicine project • Kerala Telemedicine project: Three sites are remaining. Requested extension upto 30th June, 2007. Site remain as they are not ready for deployment. Site preparation has been taken up. <ul style="list-style-type: none"> • Tamilnadu –Roypetta Project : Total of seven sites have been approved. Off these infrastructure is being made ready at 3 sites for deployment. The sites are expected to be ready by May 30, 2007. • Development of libraries for Medical Protocols HL7 and DICOM is in progress. • Completed the first phase of telemedicine implementation for Adyar Cancer Institute, Chennai, consisting of CI |

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| Sr. No | Name of Scheme/ Programme | Objective/ Outcome | Outlay 2006-07 (Rs. in crore) | | | Quantifiable Deliverables/ Physical Outputs | Projected Outcomes | Processes/ Time basis | Status as on 31.03.2007 |
|--------|---------------------------|--------------------|-------------------------------|-------------|-----------|---|--------------------|---|-------------------------|
| | | | Non-Plan | Plan Budget | Comp IEBR | | | | |
| | | | | | | | | <p>Adyar and two peripheral centres at Nellore, Gandhigram. Requested Minister of CIT for inauguration of Telemedicine activities at CI Adyar</p> <ul style="list-style-type: none"> • Implementation at remaining four centres initiated • Submitted the Detailed Project Report for ONCONET INDIA project to Ministry of Health, GoI • Implementation of Telemedicine at 5 Taluk Hospitals and 3 specialty hospitals: Completed implementation at six locations. The project was inaugurated by Chief Minister of Kerala on 16th March 2007. • Enhancement of Onconet Initiated • Rural telemedicine for Tirur Taluk , Kerala Initiated • Development of web based Telemedicine SW using Open Source SW is in progress. • Modern Medicine portal is in regular use by all five Directorates for pay bill preparation <p>Deployment of solutions - 2nd half</p> <p>June 2006 followed by deployment</p> <p>At least in 6</p> | |

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| Sr. No | Name of Scheme/ Programme | Objective/ Outcome | Outlay 2006-07 (Rs. in crore) | | | Quantifiable Deliverables/ Physical Outputs | Projected Outcomes | Processes/ Time basis | Status as on 31.03.2007 |
|--------|---------------------------|--------------------|-------------------------------|-------------|-----------|---|--|-----------------------|--|
| | | | Non-Plan | Plan Budget | Comp IEBR | | | | |
| | | | | | | <p>e-Governance and Allied ICT Applications</p> <ul style="list-style-type: none"> • Tools and products for ICT application for masses • Development of new e-Governance products, Solutions. • Deployment of already developed e-Governance solutions in additional states and Government departments. | <ul style="list-style-type: none"> • To deploys e-solutions, promising transparency, speedy information dissemination, higher administrative efficiency and improved public services. • Deployment of practices and skill sets | States - March 2007 | <ul style="list-style-type: none"> • HIMS under Implementation at Indira Gandhi Medical College, Shimla. • Implementation of HIMS at Regional Institute of Medical Sciences, Imphal is likely to be completed. • eSanjeevani ver2.0 Nephrology, Diabetes: Completed, Appointed scheduling module, Dermatology in progress • Deployment solution for Prime Minister Gram Sadak Yojana (PMGSY) is in maintenance phase • Solution for IGR Karnataka is in maintenance phase • Solution for IGR Goa is under development • Solution for Works Monitoring of MPRDC is under development • Solution for Command Headquarters: System study completed • Solution for LMS for MIDC is under deployment • Spatial Decision Support System (SDSS) application developed and deployed in 8 districts of Haryana and U.P. |

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C-DAC-Achievements upto 31.12.2007

| Sr. No | Name of Scheme/ Programme | Objective/ Outcome | Outlay 2007-08 (Rs. in crore) | | | Quantifiable Deliverables/ Physical Outputs | Projected Outcomes | Processes/ Time basis | Status as on 31.12.2007 |
|--------|---------------------------|--------------------|-------------------------------|-------------|-----------|---|---|---|---|
| | | | Non-Plan | Plan Budget | Comp IEBR | | | | |
| 2. | C-DAC | | 3.00 | 75.00 | 175.00 | <p>High Performance and Grid Computing:</p> <ul style="list-style-type: none"> • Cut-over of 5-10 Teraflop facility, commencement of facility and porting of code for identified applications, bench-marking. • Work on architecture, hardware technologies and software environment for next generation PARAM systems • Continuation of PoC phase Garuda (National Grid Computing initiative) including building of communities for various applications | <p>Practical manifestation of shared HPC system to community and integration of critical technologies</p> <p>Facilitate high-end research in science and engineering of HPC support to users.</p> <p>Demonstrate impact of Grid Computing for new type of problem-solving environment / collaboration tools</p> | <p>2Q-3Q 2007 (- end June - end September 2007)</p> <p>June 2007 to March 2008</p> <p>June 2007</p> | <ul style="list-style-type: none"> • Design and development of in-house work completed. Proposal submitted for approval to competent authority for procurement of components and sub-system. <p>Development of 10 GB/Sec. Interconnect system completed. Synchronized Operationalization of the same targeted with the commissioning of new HPC System.</p> <p>The Proof-of-Concept (PoC) Garuda project has achieved its objectives and is now being used for Grid enablement of applications, tools and utilities.</p> <p>C-DAC has recently hosted the 3rd IEEE International e-Science and Grid Computing Conference during December 10-13 at Bangalore. This has provided valuable inputs for main Garuda Project.</p> |

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| Sr. No | Name of Scheme/ Programme | Objective/ Outcome | Outlay 2007-08 (Rs. in crore) | | | Quantifiable Deliverables/ Physical Outputs | Projected Outcomes | Processes/ Time basis | Status as on 31.12.2007 |
|--------|---------------------------|--------------------|-------------------------------|-------------|-----------|---|---|---|--|
| | | | Non-Plan | Plan Budget | Comp IEBR | | | | |
| | | | | | | <ul style="list-style-type: none"> Approval and Commencement of Main Garuda –project report for Main Garuda. Preparation of DPR and approval for shared e-science resources infrastructure and commencement of lab setting up <p>Multilingual Computing</p> <ul style="list-style-type: none"> Completion of the release of Free Indian languages softwares and fonts (CDs and downloadable Web-site) | <p>Build capability in emerging applications of Grid infrastructure for global competitiveness</p> <p>Development of local language base for IT to enable its large-scale deployment and use by masses.</p> <p>Development and use of content in major Indian languages and automatic content generation from one language to another</p> | <p>June 2007 - September 2007</p> <p>March 2008</p> <p>March 2008</p> <p>March 2008</p> | <p>The proposal for the main phase of Daruda initiative is being finalized in consultation with the Experts. The lessons from the PoC phase are being incorporated into this proposal.</p> <ul style="list-style-type: none"> Free Bangla and Gujarathi Languages software tools and fonts (CDs & downloads) ready for release. English to Malyalam Lexicon of 50,000 words (Angla – Malyalam) created. Bangla-Assamese-Manipuri Speech Corpora is ready for release. TTS for health and tourism domain under consortium of 7 asian countries in progress. Prosodic modeling for Malayalam TTS in progress. Robust English- Bangla Machine Translation system has been developed; field trials initiated at few schools; integration of OCRs for Hindi, Bengali, Gurumukhi, Tamil, Telugu, Kannda, Malayalam, Oriya, Gujarathi & Nepali is |

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| Sr. No | Name of Scheme/ Programme | Objective/ Outcome | Outlay 2007-08 (Rs. in crore) | | | Quantifiable Deliverables/ Physical Outputs | Projected Outcomes | Processes/ Time basis | Status as on 31.12.2007 |
|--------|---------------------------|--------------------|-------------------------------|-------------|-----------|---|--|---|---|
| | | | Non-Plan | Plan Budget | Comp IEBR | | | | |
| | | | | | | <ul style="list-style-type: none"> Robust Document Analysis and Recognition system for printed Indian Scripts Delivery Driven R&D in OCR/OHR, Machine Assisted Translation (MAT), CLIR integration with applications (e-Governance, Kiosks, etc.) <p>VLSI, Embedded & Real Time Systems, Power / Agri / Strategic Electronics, Broadband, Wireless and Internet Technologies</p> <ul style="list-style-type: none"> Designing tools and components for Power distribution, Power Supply Modules, Hybrid vehicles, Remote Inspection Device Continuation of work on development of electronic tongue, tea plantation automation, Post harvesting automation of potato | <p>to enable use of IT by masses.</p> <p>New R&D initiatives in areas of speech technologies and machine-assisted translation.</p> <p>To strengthen national capability in Power Electronics and associated areas</p> <p>To develop technologies for Real-time, high-speed Digital Controllers and Power Semiconductor devices for power quality improvement, electric traction,</p> | <p>March 2008</p> <p>March 2008</p> <p>Concurrent R&D and Deployment</p> <p>Quarterly verifiable deliverables</p> | <p>under progress</p> <ul style="list-style-type: none"> Machine Translation for English to seven Indian languages (Hindi, Marathi, Tamil, Bangla, Oriya, Urdu & Punjabi) is in progress; Machine translation for Indian to Indian languages for 9 language pairs is in progress. Cross Lingual Information Access is in progress for English to Indian language (Hindi, Marathi, Punjabi, Tamil, Telugu and Bangla) Technology for front-end converter of UPS transferred to Keltron, and the same is commercialized. Three prototypes of Power Supply modules for Mirage aircraft has been supplied to Air Force station, Gwalior. Fabrication of E-Nose and E-vision for delivery to a few reputed tea growers has been completed. |

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| Sr. No | Name of Scheme/ Programme | Objective/ Outcome | Outlay 2007-08 (Rs. in crore) | | | Quantifiable Deliverables/ Physical Outputs | Projected Outcomes | Processes/ Time basis | Status as on 31.12.2007 |
|--------|---------------------------|--------------------|-------------------------------|-------------|-----------|--|--|--|--|
| | | | Non-Plan | Plan Budget | Comp IEBR | | | | |
| | | | | | | <ul style="list-style-type: none"> • Low voltage Embedded Real time Control for 3 Wheelers • Automation System Technology Centre • Implementation of Area Traffic Control System • Digital, Programmable Hearing Aid • Sensor Network • Development of software defined radio equipment • Enhancement of TETRA technology | <p>pollution free vehicles, automotive electronics, non-conventional energy sources, remote controlled vehicle, etc.</p> <p>To strengthen India's capabilities in Sensor Network and Embedded Systems</p> <p>To be a National Centre in Digital Broadband & Wireless Systems</p> <p>To enable leadership in R&D.</p> | <p>Quarterly</p> <p>December 2007</p> <p>December 2007</p> <p>December 2007</p> <p>Prototypes - May 2007</p> <p>Prototype - Dec. 2007</p> <p>2nd version - Dec. 2007</p> | <ul style="list-style-type: none"> • Prototype II of Hybrid 3-wheeler electric vehicle fabricated for development testing at Automotive Research Association of India (ARAI). • After successful prototype deployment, Pune Municipal Corporation is expanding the system with 30 more junctions. 2nd phase augmentation in progress at Jaipur. Technology partner M/s. Keltron has got Kolkata ATCS consisting of 40 junctions • PRSG meeting recommended for ASIC fabrication of Digital Programmable Hearing Aid with a project proposal. • Established WSN lab with 18 Motes and sensor boards with temperature, humidity, pressure accelerator and magnetometer. |

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| Sr. No | Name of Scheme/ Programme | Objective/ Outcome | Outlay 2007-08 (Rs. in crore) | | | Quantifiable Deliverables/ Physical Outputs | Projected Outcomes | Processes/ Time basis | Status as on 31.12.2007 |
|--------|---------------------------|--------------------|-------------------------------|-------------|-----------|--|--|--|--|
| | | | Non-Plan | Plan Budget | Comp IEBR | | | | |
| | | | | | | <p>Open Source Software (OSS), Geomatics, e-Governance and ICT applications</p> <p>Open Source Software:</p> <ul style="list-style-type: none"> • NRC-FOSS to develop mature ecosystem for FOSS in India; BOSS distribution to be started; e-Governance and education on domain alongwith language components to be addressed • Core Development to develop stacks for Enterprise Service Bus, SOA etc. • Application Frameworks for verticals like Government, Healthcare and Banking. | <p>This would help reduce investments in software purchase by developing OSS for various disciplines and promoting their usage.</p> <p>To develop and deploy e-Solutions, which promise improved transparency, speedy information dissemination, higher administrative efficiency & improved public services.</p> <p>To participate in central, state and local e-Governance programme</p> | <p>Remaining set of PoC deployment in field in 2-3 areas –March 2007</p> <p>1-2 scaled up version - March 2007</p> <p>March 2008</p> | <ul style="list-style-type: none"> • BOSS Linux Server edition Ver 1.0 beta ready for release. A training programme was organized in Chennai to the around 40 technical members of support groups. • A detailed study of the Service Oriented architecture (SOA) framework using open source tools for e-Governance applications was completed. An application for Personnel Information System has been developed & ported as Proof of Concept. |

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| Sr. No | Name of Scheme/ Programme | Objective/ Outcome | Outlay 2007-08 (Rs. in crore) | | | Quantifiable Deliverables/ Physical Outputs | Projected Outcomes | Processes/ Time basis | Status as on 31.12.2007 |
|--------|---------------------------|--------------------|-------------------------------|-------------|-----------|---|--|---|--|
| | | | Non-Plan | Plan Budget | Comp IEBR | | | | |
| | | | | | | <p>e-Governance</p> <ul style="list-style-type: none"> • Development of new e-Governance products, Solutions. • Deployment of already developed e-Governance solutions in additional states and Government departments. • Development of Mission mode and other e-Governance projects figuring in NeGP and products in this sector. • Development of e-Governance Solutions for the Gram Panchayats in their local languages <p>Geomatics Development and Deployment of GIS enabled solutions for</p> <ul style="list-style-type: none"> • Land Records Management, • Urban Infrastructure Management • Natural Recourse Management • Vehicle Tracking System • Grid enabled GIS based data centre | <p>To deploy e-solutions, promising transparency, speedy information dissemination, higher administrative efficiency and improved public services.</p> <p>Deployment of practices and skill sets</p> <p>It would strengthen core competency and build up additional GIS based solutions.</p> <p>To provide Geomatics based Decision Support System for rural and semi-urban areas</p> <p>To build country's strength in cyber security to address:</p> | <p>At least in 6 States - March 2007 Focus on deployment pilots: 1st half More development: 2nd half Prototype by Nov. 2007</p> <p>Development of solutions -1st half</p> <p>Deployment of solutions - 2nd half</p> | <ul style="list-style-type: none"> • New modules for accounting added to Prime Minister Gram Sadak Yojana (PMGSY). (OMMS) already deployed and under operation. Indian Language interfaces are also being added. • New version of IGR currently being deployed at Goa • Solutions for PWD, MIDC and MPRDC under development and pilot testing • Proof-of- concept version of NSDG Messaging Gateway developed and successfully demonstrated • Deployment of e-Governance kiosks at 10 locations in Lao PDR in progress • Spatial database creation for roads of Orissa in progress under Prime Minister Gram Sadak Yojana (PMGSY) - Orissa. • Fieldwork for Kharri season for "landuse and landcover" for entire Bihar and part of Uttar Pradesh has been completed |

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| Sr. No | Name of Scheme/ Programme | Objective/ Outcome | Outlay 2007-08 (Rs. in crore) | | | Quantifiable Deliverables/ Physical Outputs | Projected Outcomes | Processes/ Time basis | Status as on 31.12.2007 |
|--------|---------------------------|--------------------|-------------------------------|-------------|-----------|---|---|---|---|
| | | | Non-Plan | Plan Budget | Comp IEBR | | | | |
| | | | | | | <p>Cyber Security</p> <ul style="list-style-type: none"> • Security tools and technologies for <ul style="list-style-type: none"> - Network Forensics - Cyber Security - Cyber Forensics • Algorithms for Steganography • Steganography – To continue work in respect of retrieval of information from Video • Cryptanalysis: Development of Algorithms and High Performance Computing Technologies • Development of Face recognition solution • Design and Development of Malware Attack Prevention System <p>Health Informatics</p> <ul style="list-style-type: none"> • Deployment of Telemedicine in Tamilnadu, Himachal Pradesh and other States. | <ul style="list-style-type: none"> – Export restrictions on security products by – advanced countries. – Confidence building in veiled security threat. – Creation of knowledge among people. <p>Establishment of telemedicine networks in the country and building technical strengths in BioInformatics / Medical Informatics</p> | <p>Initial deployment in NIC, strategic users: 1st half 2007</p> <p>Patent filing & deployment in 2nd half 07-08</p> <p>Scaling up</p> <p>- Nov. 2008</p> <p>At 10 locations in HP – March 2007 7 locations in Tamilnadu – March 2007</p> | <ul style="list-style-type: none"> • Cybercheck tools released and being used by Law Enforcement agencies and being supported. • Know your Network (KYN) and NetForce are ready for release; having tools for aiding network forensics and forensics of devices like PDAs and smart phones • Face recognition 2.0 released for beta testing. • Implemented Algorithms for cryptanalysis on High Performance system for symmetric Public Key and hardware accelerators to decipher block ciphers. • Proposal for Phase II has been cleared by PRSG • Deployment of Telemedicine Solution in the state of Kerala and Tamilnadu has been successfully completed and is in progress in Himachal Pradesh; Deployment in Ethiopia completed and proposal for additional 20 patient sites and 5 specialist sites with upgrade of |

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| Sr. No | Name of Scheme/ Programme | Objective/ Outcome | Outlay 2007-08 (Rs. in crore) | | | Quantifiable Deliverables/ Physical Outputs | Projected Outcomes | Processes/ Time basis | Status as on 31.12.2007 |
|--------|---------------------------|--------------------|-------------------------------|-------------|-----------|---|--|--|---|
| | | | Non-Plan | Plan Budget | Comp IEBR | | | | |
| | | | | | | <ul style="list-style-type: none"> • National Roll out of Cancer Net • Enhancement of features of the following products <ul style="list-style-type: none"> – Mercury – Sanjeevani – Sushrut • Development of <ul style="list-style-type: none"> – Web Mercury Interface – Web based e-Sanjeevani – Web based Imaging system and telemedicine network for Cancer Institute (WIA) • Consolidation of AyuSoft project efforts and addition of further components <p>Ubiquitous Computing</p> <ul style="list-style-type: none"> • Development of coordinating & context aware middleware using Ubiquitous semantic space • Setting up of intelligent room & integrating middleware with RFIDs & sensor devices • Setting up Wireless Sensor Networks Labs • Prototype system capable of deployment in agriculture research | <p>Processing of data as well as offline transfer and receive over Web.</p> <p>Develop a web based image processing system for Real Time analysis of patient data and images</p> <p>Establishing intelligent room to showcase research prototypes developed and for conducting experiments and Integrating with computational grid.</p> <p>Development of Middleware Architecture based on SOA Framework</p> <p>Context awareness computing, modeling & reasoning & development of</p> | <p>Version 2.2 – March 2007</p> <p>Version 1.0 April 2007</p> <p>June 2006- May 2009</p> <p>March 2008</p> | <ul style="list-style-type: none"> • Development of additional software modules for Mercury, Sanjeevani & Sushrut is in progress; User Interface of Mercury has been revamped and productionization of its Web Interface version completed. HIS (Sushrut) for PGI is in progress. • Development of libraries for Medical Protocols HL7 and DICOM is in final phase and progressing as per plan. • 150 installations of ver 1.0 of AyuSoft has been completed in India & abroad. • Project on development of a framework, suite of technologies and prototype applications in UbiComp commenced • Literature survey on Context Modelling approaches, Intelligent Room projects, Health Care Architecture, Context Aware Applications, |

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| Sr. No | Name of Scheme/ Programme | Objective/ Outcome | Outlay 2007-08 (Rs. in crore) | | | Quantifiable Deliverables/ Physical Outputs | Projected Outcomes | Processes/ Time basis | Status as on 31.12.2007 |
|--------|---------------------------|--------------------|-------------------------------|-------------|-----------|--|--|-----------------------|---|
| | | | Non-Plan | Plan Budget | Comp IEER | | | | |
| | | | | | | applications for sensing environmental parameters for effective decision making in agriculture applications <ul style="list-style-type: none"> • Development of RFID based technologies | toolkit for home and healthcare Development of system for sensing temp, humidity, solar radiation, etc. | | Ultra-wide Band Technology, Location sensing, and Service Oriented Device Architecture , Zigbee protocol stack have been completed. <ul style="list-style-type: none"> • Architecture for sensor node and context-aware framework has been finalized. • Four papers published/presented in International conferences based on context aware computing, location based services and distributed discovery using semantic clustering. |

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

DOEACC Society is a Society of the Department of Information Technology. It has its own 10 Centres at Aizawl, Aurangabad, Calicut, Chandigarh, Gorakhpur, Imphal, Srinagar/Jammu, Kohima, Kolkata and Tezpur/Guwahati and three Branch Offices at Delhi, Lucknow and Shimla with its Headquarters at New Delhi. DOEACC Society accredits institutes/organizations for conducting courses particularly in the non-formal sector of IT Education & Training. It is also a National Examination Body, which accredits institutes/organizations for conducting courses particularly in the non-formal sector of IT Education & Training.

The Centres are also undertaking government sponsored projects in the field of ICT & related activities. Status of activities upto 31.03.2007 and as on 31.12.2007 is given below:

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Review of Performance of Statutory and Autonomous Bodies DOEACC-Achievements upto 31.03.2007

| Sr. No | Name of Scheme/ Programme | Objective/ Outcome | Outlay 2006-07 (Rs. in crore) | | | Quantifiable Deliverables/ Physical Outputs | Projected Outcomes | Processes/ Time basis | Status as on 31.03.2007 |
|--------|---------------------------|---|-------------------------------|-------------|-----------|--|--|--|--|
| | | | Non-Plan | Plan Budget | Comp IEBR | | | | |
| 3 | DOEACC | To carry out HR Development in Information Electronics & Communications Technology (IECT). To produce quality professionals through Long Term & Short Terms Courses in the Non-Formal Sector. | 1.70 | 12.00 | 49.62 | <ul style="list-style-type: none"> O/A/B & C Levels (Non-Formal Sector of IT Education & Training) Half Yearly Examinations. 22,000 students are expected to qualify at various Centres of courses during the year 2006. To conduct training for Formal Sector Long Term Courses (M.Tech, MCA, BCA, PGDCA, Diploma in EE & CS etc.) – 1209 students To conduct training for Non-Formal Sector Long Term Courses (DOEACC O/A/B Level courses, DOEACC Bioinformatics O/A Level courses – 2329 students. Hardware Courses – 640 students. Training for Short Term courses of duration less than one year – 12,622 students. | IT Trained Professionals will be available for the industry for employment and will be contributing to the economy | July 2006 & January 2007 Conduct Examination & Issue Certificates Annual / Semester wise exams Annual / Semester wise exams Batch-wise exams | 12953 students have qualified in DOEACC O/A/B/C level in theory papers during July, 2006 and January, 07 Exam. 1209 students are ongoing training for Long Term Courses. (M. Tech., MCA, BCA, PGDCA Diploma in EE & CS etc.) 4146 students are undergoing training for Long Term Courses (DOEACC O/A/B/C Level, DOEACC Bio-Informatics O & A Level and DOEACC Hardware O & A Level.) 60437 no. of students have been trained including sponsored Projects undertaken during the year. |

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DOEACC-Achievements upto 31.12.2007

| Sr. No | Name of Scheme/ Programme | Objective/ Outcome | Outlay 2007-08 (Rs. in crore) | | | Quantifiable Deliverables/Physical Outputs | Projected Outcomes | Processes/ Time basis | Status as on 31.12.2007 |
|--------|---------------------------|---|-------------------------------|-------------|-----------|---|---|---|--|
| | | | Non-Plan | Plan Budget | Comp IEBR | | | | |
| 3 | DOEACC | To carry out HR Development in Information Electronics & Communication s Technology (IECT). To produce quality professionals through Long Term & Short Term Courses in the Non-Formal Sector. | 1.70 | 0.50 | 54.59 | <p>DOEACC Scheme O/A/B & C Levels (Non-Formal Sector of IT Education & Training) Half Yearly Examinations. -20,000 students are embedded to qualify at various Centres of courses during the year 2007-08</p> <p>DOEACC Centres to conduct training for Formal Sector Long Term Courses (M.Tech, MCA, BCA, PGDCA, Diploma in EE & CS etc.) – 1270 students</p> <p>To conduct training for Non-Formal Sector Long Term Courses (DOEACC O/A/B Level courses, DOEACC Bioinformatics O/A Level courses – 3500 students. Hardware Courses at O/A Level – 3500 students.</p> <p>Training for Short Term courses of duration less than one year – 13,800 students.</p> | IT Trained Professionals will be available for the industry for employment and will be contributing to the economy. | <p>July 2007 & January 2008</p> <p>Conduct Examination & Issue Certificates</p> <p>Annual / Semester wise exams</p> <p>Annual / Semester wise exams</p> <p>Batch-wise exams</p> | <p>52994 students passed in July,07 examinations for O/A/B & C level and 6334 certificates issued from April,07 to Dec, 07.</p> <p>1016 No. Students undergoing training</p> <p>5649 no. Students under going training</p> <p>3936 no. Students trained 9658 no. students undergoing training under CAMDTP programme of NCPUL and 41,000 students of Government schools of HP by DOEACC Centre Chandigarh.</p> |

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6.2.4 Software Technology Parks of India (STPI);

STPI has played a developmental role in the promotion of software exports with a special focus on SMEs and start up units. Today the exports by STPI registered units are more than 95% 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. Status of activities upto 31.03.2007 and as on 31.12.2007 is given below:

STPI-Achievements upto 31.03.2007

| Sr. No | Name of Scheme/ Programme | Objective/ Outcome | Outlay 2006-07 (Rs. in crore) | | | Quantifiable Deliverables/ Physical Outputs | Projected Outcomes | Processes/ Time basis | Status as on 31.03.2007 |
|--------|------------------------------------|--|-------------------------------|-------------|-----------|---|--|---|---|
| | | | Non-Plan | Plan Budget | Comp IEBR | | | | |
| 4 | STPI & Export Promotion | To promote India's export of Electronics and IT Services | - | 4.00 | 2.85 | <ul style="list-style-type: none"> • To arrange participation of Indian SMEs in 7 Export Promotional events abroad • India Soft 2007 – A forum which provides Indian SMEs an opportunity to meet foreign buyers | It enables Indian SMEs to increase their export potential. | Participation in 7 events from June 2006 – March 2007 | Organised following Export Promotional events <ol style="list-style-type: none"> 1. Outsource World London, July 2006. 2. Frankfurt Book Fair, October 4-8 2006, Germany 3. OutsourceWorld New York, 17-18 November 2006 4. Electronica 2006, Munich, Germany 5. Gitex 2006, Dubai 6. INDIASOFT 2007, 9-10 January 2007, Hyderabad 7. CeBIT 2007, 15-21, March 2007, Hannover, Germany. |

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STPI-Achievements upto 31.12.2007

| Sr. No | Name of Scheme/ Programme | Objective/ Outcome | Outlay 2007-08 (Rs. in crore) | | | Quantifiable Deliverables/Physical Outputs | Projected Outcomes | Processes/ Time basis | Status as on 31.12.2007 |
|--------|---------------------------|---|-------------------------------|-------------|-----------|---|--------------------|-----------------------|---|
| | | | Non-Plan | Plan Budget | Comp IEBR | | | | |
| 4 | STPI | To promote exports of electronics & IT. | | 0.50 | 2.70 | This programme is for promotion of exports and provide facility to Indian Small and Medium Organisations for participations in export promotion events in the software and electronics sectors. | | On continual basis | <p>Organised following Export Promotional Events</p> <ol style="list-style-type: none"> 1. Outsource World London, July 2006. 2. Frankfurt Book Fair October 4-8 2006, Germany 3. OutsourceWorld New York, 17-18 November 2006 4. Electronica 2006, Munich, Germany 5. Gitex 2006, Dubai <p>Will Organize following events:</p> <ol style="list-style-type: none"> 1. INDIASOFT 2007, 9-10 January 2007, Hyderabad <p>CeBIT 2007, 15-21, March 2007, Hannover, Germany.</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 Registered Scientific Society in March 1990 under Department of Information Technology as an unique concept for development of viable technologies mainly in the area of electronics materials. C-MET's mission is to develop knowledge base in electronics materials and their processing technology for Indian industries and to become a source of critical electronic materials, know-how and technical services for the industry and other sectors of economy"

C-MET is operating with its laboratories with well carved out programmes at Pune, Hyderabad and Thrissur. Status of activities upto 31.03.2007 and as on 31.12.2007 is given below:

C-MET-Achievements upto 31.03.2007

| Area/ Projects | Physical Targets | Achievements (up to 31.03.2007) |
|---|---|---|
| <p><u>Ultra-high Purity Materials</u></p> <p>Development of Pilot Plant technology for the purification of high purity Cadmium</p> | <ul style="list-style-type: none"> • Modifications / upgradation of existing zone refiner / vacuum distillation system by automation and reaction chamber resign respectively. • Optimization of process parameters to achieve 6N and above purity cadmium. • Testing and evaluation at end user's place. • Fine tuning of overall process parameters and integration. • Report preparation. | <ul style="list-style-type: none"> ○ Developed the process technology to purify raw (3N) cadmium using vacuum distillation at 3 to 5 kg batch-size, followed by de-oxidation of cd under hydrogen ambient to achieve 6N+ purity.. ○ Established the analytical procedure to evaluate all major metallic as well as gaseous (O, N) impurities. ○ Process Technology Document for 6N cadmium for transfer of technology with Binani Zinc Ltd, Cochin, Kerala was prepared. |
| <p>Pilot scale preparation of low voltage capacitor grade Tantalum powder (300 kg/ annum)</p> | <ul style="list-style-type: none"> • Experiments on modified systems. • Optimization of process parameters. • Testing & evaluation of Ta powder at user industries • Regular production of Ta powder at desired scale. • Documentation is under process. | <ul style="list-style-type: none"> • Experiments conducted on the modified system & process parameters optimized • Evaluation of capacitor grade Ta powder done at ECIL, CV in the range of 14000-16000 μFV/gm achieved after regular production • Technology transfer document prepared & technology transfer completed for structural grade Ta powder to M/s. Anabond Ltd. |

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| <p>Development of Process technology for the Pilot level preparation of Tantalum pentoxide.</p> | <ul style="list-style-type: none"> Project is completed. | <ul style="list-style-type: none"> Technology transfer document prepared and technology transferred to M/s. Anabond Ltd., Chennai for the high purity tantalum oxide. |
| <p><u>Electronic Packaging</u> Development of materials and processes for Electronic Packaging</p> | <ul style="list-style-type: none"> Upscaling of solder paste. Capability for processing basic LTCC interconnects upto a few layers Development of indigenous materials for microvia (Photodielectric & Isotropic conducting epoxy) Technology for preparation of solder bumps | <ul style="list-style-type: none"> Technology on solder paste has been transferred to M/s. B T Solders, Bangalore on as-is-where-is basis. Established design and prototyping facility preparing Low Temperature Co-fired Ceramic (LTCC) circuits, substrates and packages. Developed capability for preparing 10 layer LTCC packages having electrical interconnections, hermetic sealing and ball grid arrays. Developed Photoimageable Silver, Gold and Dielectric paste for new generation Hybrid Microelectronic circuits. Activities related to microvia and solder bumps deferred due to work load of sponsored projects. |
| <p>Development of LTCC green tapes</p> | <ul style="list-style-type: none"> LTCC Green tapes based on Al₂O₃+ glass composition LTCC green tapes based on P₂O₅-B₂O₃-SiO₂ glass-ceramic composition Process technology for LTCC green tapes by co-firing with 100% Ag-based paste | <ul style="list-style-type: none"> Optimized co-firing process for LTCC green tapes with pure Ag paste and compatibility established Prepared 6" x 6" size LTCC green tapes with 125-135 micron thickness. Supplied 25 Nos. of 6" x 6" LTC green tapes to C-MET, Pune. |
| <p>Development of Polymer-ceramic based microwave substrates</p> | <ul style="list-style-type: none"> 250 gms batch PTFE/ceramic high dielectric composites High dielectric and low loss microwave substrates (2 x 2" size and 0.025" thick) 250 gms batch PTFE/ceramic/woven glass low dielectric composites Low dielectric and low loss microwave substrates (2 x 2" size and 0.025" thick). | <ul style="list-style-type: none"> Fine tuning of the microwave dielectric properties of the Cu clad low K substrates successfully completed. 25 Nos. of low K substrates meeting all the targeted specifications have been prepared and system level evaluation carried out. |
| <p><u>Optoelectronics Materials</u> Development of Nanocrystalline semiconductor doped coloured Glasses</p> | <ul style="list-style-type: none"> Continuation of development of GG-400, OG-515 for larger trials. GG-495 schott type glasses will be developed for remote sensing camera . | <ul style="list-style-type: none"> Preparation of glass filters of OG-515 type has accomplished at Moderate scale. Optimized striking conditions for in-situ growth of semiconductor nanocrystals to achieve sharp UV-Visible cut off at 515 nm Optimized melting conditions for preparation of OG-495 glass filter and optical characterization of as prepared OG-515 glass was carried out. |

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| Development of organic polymer liquid crystal based non-linear / Wave guide optoelectronic materials | <ul style="list-style-type: none"> • Polymer of 50 gm batch size will be developed for NLO application • Evaluation of SHG properties. | <ul style="list-style-type: none"> • Synthesized optical grade PMMA (100 gm) • Developed free standing films based on PMMA / polycarbonate / polystyrene and m-Nitroaniline for NLO applications • Prepared films show excellent SHG properties. |
| Quantum dots Polymer Composites for Display Devices | <ul style="list-style-type: none"> • Some suitably identified optically transparent polymer(s) • Methods for preparation of various electronic grade organometallic chemicals e.g. dimethyl cadmium • A methods for preparation of quantum dots of II-VI semiconductors <ol style="list-style-type: none"> a. for preparation of air stable QDs of CdS b. for preparation of air stable QDs of CdSe | <ul style="list-style-type: none"> • Developed quantum dots of CdS for Solar cells by sonochemical route • Developed quantum dots of ZnSe for optoelectronics by organo metallic route and its tuning for photoluminescence is continued • Developed Copper nanoparticles • Developed Nano Pd-Ag via Sodium Formaldehyde Sulphoxalate route |
| <u>Sensors & Actuators</u> Polymeric Sensors | <ul style="list-style-type: none"> • Novel materials and the processes to make the humidity sensors • Efforts will be made to combine suitable materials to make sensors in the device form. • Laboratory scale –prototype sensors will be developed and will be tested not only in our Laboratory but also outside (like in Universities and Industries). • A technology transfer package / document for laboratory scale production of such sensors | <ul style="list-style-type: none"> • Prepared thin films of substituted polyanilines and studies humidity sensing property. |
| Design & development of Multilayer actuator | <ul style="list-style-type: none"> • 250 g batch of PMN-PT material • Multilayer electrostrictive actuator | <ul style="list-style-type: none"> • Multilayer PMN-PT based electrostrictive actuators from indigenous source (synthesized at 250 g level) with ~ 100 Nos. of layers of individual layer thickness ~ 50 micron was fabricated which showed targeted 0.1 % strain at 150V. |

C-MET-Achievements upto 31.12.2007

| Area / Projects | Physical Targets | Achievements (upto 31.12.2007) |
|---|--|---|
| Development of LTCC materials & applications for Integrated passive components Development of HD | <ul style="list-style-type: none"> • Initial compositions of LTCC conductor pastes. • Initial compositions of base materials for integrated capacitors and inductors • Development of HF components | <ul style="list-style-type: none"> • Patterning optimization using photolithography is in progress. • Repeatability such as, printability, sheet resistance and gross warpage etc, of the formulated Ag/Pd paste composition was tested on the LTCC substrate. • Initiated formulation of different paste compositions by varying the glass percentage, organic vehicle in |

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| interconnects | <ul style="list-style-type: none"> Initial composition of lead free solder bath and patterns for photolithography. | order to study the parameter effects on the LTCC substrate. |
| Process for the generation of nanopowders | <ul style="list-style-type: none"> Procurement of modelling software & initiation of designing & fabrication of small scale TATP Assembly | <ul style="list-style-type: none"> This activity has been discontinued since the commissioning and installation of full fledged Transferred Arc Plasma Reactor assembly to generate nanomaterials @ 250 gm/hr (under grant-in-aid project) is expected to take place in March 2008. |
| Coloured glasses for remote sensing camera | <ul style="list-style-type: none"> Reverse Engineering of RG 630 Glass. Preliminary runs for fabrication of RG 630 Glass | <ul style="list-style-type: none"> The reverse engineering data of Schott RG 630 Glass has been generated in order to get clues for the preparation of the desired optical filters. Optimization of host glass composition at 50 gm level continued. Five melting operations attempted. |
| Polymer Nanocomposite for Battery and other Applications | <ul style="list-style-type: none"> Preliminary synthesis of Polymer-LiMnO₂/ LiMn₂O₄ nanocomposite for battery and other applications. Preliminary runs of synthesis of ZnON and ZnON – polymer nanocomposite and its physicochemical characterization. | <ul style="list-style-type: none"> This activity has been postponed considering the time bound commitments of related sponsored / grant-in-aid projects |
| Process for nanocomposite Preparation | <ul style="list-style-type: none"> Nanocomposite from polyethylene and polycarbonate | <ul style="list-style-type: none"> This activity will be taken up in future if sponsored project of complimentary nature is granted. |
| Air stable quantum dots of Semiconductors, mixed chalcogenides and sundry nano-sized powder. | <ul style="list-style-type: none"> Preparation of organometallic / inorganic precursors and process development of passivated free standing QDs of II-VI semiconductors and studies of their optical properties. | <ul style="list-style-type: none"> The temperature dependence optical studies were conducted on CdSe quantum dots. Quantum dots of CdSe were characterized by XRD and particle size distribution profile. The particle diameter in the range of 2-8 nm was estimated from XRD with absorption bands at about 450 nm. Full characterization of organically doped TiO₂ nano-particles was completed |
| Experimental setup for preparation of nano-refractory powders | <ol style="list-style-type: none"> Establishment of infrastructure for the preparation of nanorefractory powders | <ul style="list-style-type: none"> Indenting process of Sodium Flame Encapsulation system is under progress. Vacuum Oven procured. |
| Facilities for purification handling, testing and packaging of 7N Gallium at 2 Kg batch level. | <ul style="list-style-type: none"> Establishment of hydrochemical processing Gallium | <ul style="list-style-type: none"> Acid sub-boiling distillation system procured and installed. Horizontal zone refining system indented. Purchase Order being released for High Vacuum refining system. |
| Fabrication of important process systems for the purification of zinc | <ul style="list-style-type: none"> Design and fabrication of Vacuum Distillation and zone melting system. | <ul style="list-style-type: none"> The distillation system was tested and preliminary experiments conducted on Zinc. |
| Process equipment for purification of Bismuth | <ul style="list-style-type: none"> Design and fabrication of crystal growth & zone refining system and trial run | <ul style="list-style-type: none"> Zone refiner system indented and Purchase Order placed for Crystallization Furnace and Glove Box. |
| Aerocapacitors with specific capacitance, 10-40 F/g | <ul style="list-style-type: none"> Preparation of RF aerogels & optimization of gel synthesis | <ul style="list-style-type: none"> RF and Carbon aerogels and the effect of R/C on aerogel properties are being studied. |
| Establishing standard test procedures for estimating trace impurities | <ul style="list-style-type: none"> Procurement of ICP-OES and installation | <ul style="list-style-type: none"> Procurement of equipment is under progress. |
| Four (4) numbers of | <ul style="list-style-type: none"> Compositions for temperature and humidity sensors | <ul style="list-style-type: none"> Evaluated properties of NTC compositions suitable for thermal sensor applications. |

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| miniature thick film sensors from nanosized powders | | |
| Microactuator of:PZT film thickness-0.25 – 1.0 μm ; Displacement – 10 μm at voltages ≤ 50 V | <ul style="list-style-type: none"> • Piezoelectric composition of Microactuator | <ul style="list-style-type: none"> • Piezoelectric characterization of some novel material compositions have been completed. |
| Four (4) numbers each of miniature thin film TCOs | <ul style="list-style-type: none"> • Composition for Zn-Sn-O and Cd-Sn-O | <ul style="list-style-type: none"> • Sintering studies of ZnO-SnO₂ powder are under progress. CdO-SnO₂ composition preparation initiated. |
| Modelling & fabrication of nanoporous ceramic / microbubbles filled PTFE composites | <ul style="list-style-type: none"> • 25 Nos of low K, PTFE composites | <ul style="list-style-type: none"> • Project deferred due to paucity of funds. |

Projections for the year 2008-09

| AREA | PROJECTS | PHYSICAL TARGETS |
|------------|---|---|
| CMET, PUNE | Integrated Glass-Ceramic Packaging PN/CC/024 | <ul style="list-style-type: none"> • Development of lead-free electroplating bath for solder bumping • Development of UBM for lead-free materials and Optimization of electroplated bumps |
| | <ul style="list-style-type: none"> • Generation of Nano-powders in a Transferred / Non-transferred Arc Plasma Reactor PN/CC/061 | <ul style="list-style-type: none"> • Designing & fabrication, redesigning & fabrication of small scale TATP Assembly • Procurement, installation & functional operation of Emission Spectroscopy • Procurement of Chemicals / Consumables and reacting gases • Initial trials and optimization to obtain sub micron / nano-powders of Ag, Au, Cu, CuO |
| | <ul style="list-style-type: none"> • Development of Glass / Polymer Nanocomposites for Optoelectronics and Energy Applications PN/CC/062 | <ul style="list-style-type: none"> • Trials of glasses / nanocomposites • Characterization and subsequent processing of glass samples and nanocomposites • Initial glass formulation based on the results of glass characterization and nanocomposites |
| | <ul style="list-style-type: none"> • Development of polymer nanocomposites PN/CC/063 | <ul style="list-style-type: none"> • Fabrication of polymer nanocomposites / solder mask composition |
| | <ul style="list-style-type: none"> • Development of Quantum dots of Semiconductors and metals for opto-electronics and electronics PN/CC/064 | <ul style="list-style-type: none"> • Preparation of organometallic / inorganic precursors and process development of passivated free standing QDs of IV-VI semiconductors and related materials studies of their optical properties |

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| AREA | PROJECTS | PHYSICAL TARGETS |
|-------------|--|--|
| | <ul style="list-style-type: none">• Nanomaterials for photonics and electronics. PN/CC/065 | <ul style="list-style-type: none">• Establishing Infrastructure facility for characterization equipment• Procurement & installation of equipments (depending on the availability of funds)• Development of test procedures for materials |

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| AREA | PROJECTS | TARGETS |
|-----------------|--|--|
| CMET, HYDERABAD | HD/CC/014 • Pilot plant scale production of Gallium (7N) for Opto-Electronic Applications | • Optimization of process parameters for hydro-chemical processing of: i) Vacuum refining expt on Ga and ii) Automatic zone refining of Ga. |
| | HD/CC/015 • Process technology development and production of ultrapure zinc | • Optimization of vacuum distillation to achieve 6N+ purity Zn. • Developing analysis procedures for metallic & gaseous impurities in zinc. |
| | HD/CC/016 • Purification and preparation of bismuth single crystals for electronic and neutron filter applications. | • Optimization of zone refining process for bismuth purification. • Trial expts using crystallization furnace. • Freezing of specification for Bridgman furnace. |
| | HD/CC/066 • Development of process technology for refractory metal nano powders (Ta, Nb, Ti) | • Procurement of SFE reactor, its installation & commissioning • Procurement of AFM • Initiation of experiment for preparation of nano tantalum powder • Testing & evaluation of the powder |
| CMET, THRISSUR | • Micro Actuator (TH/CC/25) | • Novel materials development • Microactuator fabrication • Microactuator characterization |
| | Development of C-aerogels for Supercapacitor and other applications (TH/CC/067) | • Carbon aerogels preparation and process optimization • Preparation of Aerogel based electrodes |
| | • Development of transparent Conducting oxides for electronic applications (TH/CC/68) | • Preparation of phase pure CuAlO_2 and SrCu_2O_2 compositions • Development of CuAlO_2 and SrCu_2O_2 ceramic targets for PLD |
| | • Nanomaterials based thick film sensors (TH/CC/69) | • Development of sensor compositions for humidity sensors and temperature sensors • Preparation of Nanosized materials of sensor compositions |
| | • Development of Actuator Devices (TH/CC/70) | • Fine tuning of Bimorph actuators to targeted specifications • Fabrication of Prototype Unimorph actuators. |

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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. The activities at ERNET India are 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. 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. Status of activities upto 31.12.2007 is given below:

ERNET-Achievements upto 31.12.2007

| Sr. No | Name of Scheme/ Programme | Objective/ Outcome | Outlay 2007-08 (Rs. in crore) | | | Quantifiable Deliverables/Physical Outputs | Projected Outcomes | Processes/ Time basis | Status as on 31.12.2007 |
|--------|---------------------------|---|-------------------------------|-------------|-----------|--|--|-----------------------|--|
| | | | Non-Plan | Plan Budget | Comp IEBR | | | | |
| 6 | ERNET | To serve educational and research institution and connect on single network | | 0.10 | | Upgradation of backbone infrastructure to enable delivery of application <ul style="list-style-type: none"> • Virtual class room • Digital Library | Delivery of quality education and virtual enhancement of academic infrastructure | 6 months | The backbone infrastructure at ERNET has been upgraded |

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. ESC offers a varied set of services to its members for accelerating exports. Electronics and Computer Software Export Promotion Council (ESC) is India's largest and the apex association of ICT companies comprising of 2300 members across the length & breadth of the country. Headquartered at Delhi, the Council has regional offices at Bangalore, Chennai and Kolkata as well as a representative office in Dubai.

ESC SERVICES PROFILE

ESC provides excellent trade facilitation Services to the members.

- ESC primarily focuses to assist small and medium electronics, telecom & IT entrepreneurs in their export promotion efforts, has come a long way since its inception in 1989.
- Promotes international business cooperation, facilitate linkages, collaborations, strategic alliances, joint ventures, between Indian and foreign ICT companies.
- Disseminate Trade enquiries, Global tenders, reports on markets; products trade statistics business opportunities, Government policies/notifications, etc.
- Organise participation in International trade fairs, Exhibitions, Buyer-Seller meets, Catalogue shows, Business delegations abroad, Match-making and contract promotion and various other innovative programmes to enhance electronics and IT exports
- Undertakes Market research studies in major overseas markets.

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- Receiving and Mounting Business delegations.
- ESC, a reservoir of knowledge on ICT sector offer critical insight to global companies about the in-depth knowledge and advantages of outsourcing.
- Publicity and Media campaigns in overseas markets.
- Identifies new business partners for Indian electronics, computer software and IT companies.
- As a link between the Government and its members, ESC provides a platform for interaction on policy and procedural related matters, Fixation of DEPB rates, Raising issues of Bilateral and WTO negotiations, EU anti-dumping and anti-subsidy cases, etc.
- *ESC represents interests of electronics and IT sector at Joint Trade Committees of Ministry of Commerce, Government of India as well as at Joint Business Councils of various countries.*

ESC's INITIATIVES & ACTIVITIES: 2007-08

| <u>S.No.</u> | <u>Target</u> | <u>Achievement</u> |
|--------------|--|--|
| 1 | Organising member exporters participation | <p>ESC organised member exporters participation in the following:</p> <p>ICT EXPO, Hong Kong <i>14-17 April, 2007</i></p> <p>FUTUREX, Sandton, Johannesburg, South Africa 16 – 19 MAY 2007</p> <p>OUTSOURCE WORLD, London, UK 1st & 2nd May, 2007</p> <p>KITEL - Kazakhstan <i>29th May to 1st June 2007</i></p> <p>COMMUNIC ASIA, SINGAPORE <i>JUNE 19 to 22, 2007</i></p> <p><u>GITEX DUBAI,</u> <u>(September 8-12) DUBAI</u></p> <p>OUTSOURCE WORLD, NEW YORK, USA 24th & 25th October, 2007,</p> |
| 2. | BUYER SELLER MEETS : ABROAD | <p style="text-align: center;"><u><i>ESC Organised following meets</i></u></p> <p><u><i>DELEGATION VISIT TO PANAMA</i></u> <u><i>22nd & 23rd October, 2007</i></u></p> |

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| | | <u>DELEGATION VISIT TO EU (Germany, Belgium, Holland)</u> <u>4th to 16th November, 2007</u> |
| 3 | <u>BUYER SELLER MEETS</u> <u>: IN INDIA</u> | <p>INDO :THAILAND IT PARTNERSHIP PROGRAMME 22nd August, 2007</p> <p>VISIT OF IT DELEGATION FROM MONTGOMERY COUNTY, MARYLAND, USA 12th November, 2007, New Delhi</p> <p>Colloquium : Visit by Deutsche Management Akademie Niedersachsen (DMAN) and German-Indian Business Centre (GBIC) 20th November, 2007</p> <p>INDIA & HOLLAND BUYER SELLER NETWORKING MEET 26th November, 2007, New Delhi</p> |
| 4 | ESC ANNUAL EXPORT AWARDS, | <p>To boost the spirit of IT fraternity, ESC bestows “ESC ANNUAL EXPORT AWARDS” to present Council’s Awards as a token of appreciation to the exporters in the Electronics and Computer Software sector for their excellent contributions in the following categories:</p> <ol style="list-style-type: none"> 1. Awards for highest export performance on All India Basis. 2. Sectoral Awards for SSI as well as NON – SSI units. 3. Special Awards in various categories for outstanding achievements. <p>To recognize the active contributions made by women entrepreneurs in the Electronics and Computer Software sector and to encourage them to strive for further excellence, the Council also presented Special Awards to Outstanding Women Entrepreneurs on All India Basis. In addition, a Jury Award for Outstanding Export Performance to the Best Emerging Company, which has exhibited strong presence in the global markets, was also presented.</p> |
| 5 | INDIASOFT EXPANDING HORIZONS - B2B | <p><u>By organising INDIASOFT events, ESC provides an opportunity to Indian IT SMEs to strengthen their foothold and enhance their business share globally.</u></p> <p>Till now 7 editions of INDIASOFT events have been held in various commercial cities of India and the event has generated huge awareness amongst the software & services industry across the world. The next edition will take place on 20th & 21st March, 2008 at Hyderabad International Convention Centre (HICC), Hyderabad.</p> |
| 6 | UPCOMING EVENTS | <ul style="list-style-type: none"> ➤ ESC will be setting up of Incubation Cum Export Facilitation and Business Support Centres in USA shortly. ➤ Delegation visit to ASEAN Region(Thailand, Vietnam, Philippines) – February, 2008 ➤ Delegation visit to AFRICA Region – March, 2008 ➤ Participation at COSTA RICA TECHNOLOGY INSIGHT 2008-March 2008 ➤ Business Alliance Meet in UK- February 2008 ➤ Business Alliance Meet in USA- March 2008 |