



## Chapter – II

## Financial Outlays &amp; Projected Physical Outputs/Outcomes

Sr. No	Name of Scheme/ Programme	Objective/ Outcome	Outlay 2010-11 (Rs. in crore)			Quantifiable Deliverables/Physical Outputs	Projected Outcomes	Processes/ Timelines	Remarks/ Risk Factors
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		Establishment of advanced design and test facilities				Establishment of laboratories with expert design pool and sophisticated test and validation facilities.	Electronics Design center for System on Package design and validation, Compact Antenna test Range for antenna performance evaluation, Linac research facility.	international standard. Incase of non-compliance, offer EMC design assistance <b>Timeline:</b> 2 days to 6 months  Efforts to invite industries to become institutional members in EDC, offering antenna evaluation facility to agencies and transfer of technology of Medical linear accelerator to identified industry.	made available.

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		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.				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 Elcetromagnetic cell at IISc, Bangalore	Training programmes in the area of EMI/EMC, Thermal and Antennas and initiation of master level programme in Advanced Electronics design technology	<p><b>Process:</b> Conducting regular training programmes and provision of formal teaching modules for Anna University, Chennai and work plan for Indian institute of Science, Bangalore.</p> <p><b>Timeline:</b> The M.Tech level course at Anna university to start by June 2010. Programme with IISc: Interaction with research faculty and user agencies to define work plans.</p>	Starting the M.Tech level course at Anna University is yet to be accepted by the university, though SAMEER given all inputs.

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2.	<b>Microelectronics &amp; Nanotechnology Development Programme</b>	To establish nanoelectronics & microelectronics base in the country through setting up of centres of excellence, technology development & capacity building through sponsored R&D projects in the area of nanoelectronics , nanometrology, microelectronics MEMS and VLSI design.	-	100.00	-	<p>-2 new projects on Nano-electronics Centres will be initiated.</p> <p>-8 new large /medium/small projects will be initiated.</p> <p>-The on-going projects will be continued towards their completion.</p> <p>- Establishment of two Nanoelectronics Centres at IIT Bombay and IISc Bangalore will be completed</p>	<p>It would enable to create a strong R&amp;D base in nanotechnology in the country.</p>	<p>September 2010</p> <p>October 2010</p> <p>March 2011</p>	

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3.	<b>Technology Development Council (including ITRA)</b>	<b>IT for Industrial Applications</b>  To strengthen local base for R&D/ application in Electronics and IT in the field of Industrial Electronics, Agriculture and Water Resources.	-	79.00 includes Rs.8.00 crore for NER	-	<p><b>National Mission on Power Electronics Technology Phase II (NaMPET II)</b></p> <ul style="list-style-type: none"> <li>• Initiation of the Phase-II project</li> <li>• Initiation of replication activity of the Full Spectrum Simulator (FSS) Technology</li> <li>• Initiation of replication activity for Distribution / Generation Area</li> <li>• Initiation of collaborative projects with user agencies</li> <li>• Holding of short-term courses</li> <li>• Initiating remaining projects following technology roadmap</li> <li>• Sixth Industry-Academic Meet</li> </ul> <p><b>Application of Electronics for Agriculture &amp; Environment (e-AGRIEN)</b> (expected to be approved in 2009-10)</p>	<p>Enhancement of R&amp;D infra-structure and design capability in the area of Power Electronics Technology contributing to design-led Electronics Hardware manufacturing.</p>	<p>May, 2010</p> <p>June, 2010</p> <p>November, 2010</p> <p>December, 2010</p> <p>June, 2010 Oct., 2010 Jan., 2011</p> <p>August, 2010</p> <p>October, 2010</p>	
						<p>Enhancement of R&amp;D infrastructure, design capability and demonstration on application of electronics for</p>			

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						<ul style="list-style-type: none"> <li>Finalising technology roadmap for the programme</li> <li>Initiation of development activities as per roadmap</li> <li>Initiation of a technology demonstration project</li> <li>Completion of infrastructure upgradation at C-DAC (Kolkata)</li> <li>1<sup>st</sup> workshop/seminar</li> </ul> <p><b>Automation System Technology Centre (ASTeC)</b></p> <ul style="list-style-type: none"> <li>Completion of Color Sensing System including online field trial</li> <li>Completion of development of object oriented Modelling and Simulation Platform</li> <li>Completion of Lab and field trials of all the major technology modules under development</li> <li>Completion of development of</li> </ul>	<p>agriculture and environment.</p> <p>Demonstration and availability of cost-effective solutions of Automation Technologies to Indian user &amp; manufacturing industries.</p>	<p>May, 2010</p> <p>August, 2010</p> <p>Feb., 2011</p> <p>March, 2011</p> <p>Nov, 2010</p> <p>April, 2010</p> <p>April, 2010</p> <p>Nov, 2010</p> <p>Nov, 2010</p>	

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						<p>Advanced Process Control Library and porting of algorithm into developed hardware</p> <ul style="list-style-type: none"> <li>• Holding of 3<sup>rd</sup> Industry-Academic interaction</li> </ul> <p><b>Intelligent Transportation System (ITS)</b></p> <ul style="list-style-type: none"> <li>• Launching of web portal of ITS</li> <li>• Upgradation of infrastructure at nodal center</li> <li>• Conduct of first National Conference on ITS</li> <li>• Completion of design activities for the Wireless Traffic Control System project</li> <li>• Development and validation of Traffic Simulation Software (2G – CoSiCoSt)</li> <li>• Completion of field erection activities of Real Time Traffic Counting and Monitoring System</li> </ul>	<p>Demonstration and availability of cost effective IT solutions for the road transportation sector</p>	<p>December, 2010</p> <p>March, 2010</p> <p>June, 2010</p> <p>Sept., 2010</p> <p>October, 2010</p> <p>December, 2010</p> <p>January, 2011</p>	

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		<p><b>Free &amp; Open Source Software (FOSS) Initiative</b></p> <p>Development and proliferation of Free/Open Source Software (FOSS) in India for bridging the digital divide.</p>				<ul style="list-style-type: none"> <li>• Completion of Intelligent Parking Lot Management System</li> <li>• Completion of System Architecture Development on Advanced Traveling Information System</li> <li>• Completion of Data Collection for the above project</li> </ul> <p>Ongoing projects under NRCFOSS Phase II will be progressed.</p> <p>Launching of NRCFOSS Portal as a platform</p> <p>Awareness and popularisation of FOSS in schools.</p>	<p>1. Proliferation and adoption of FOSS in the country will be facilitated.</p> <p>2. Collaboration on FOSS related activities in the country would increase.</p> <p>3. Use of FOSS would increase.</p>	<p>December, 2010</p> <p>May, 2010</p> <p>January, 2011</p> <p>March 2011</p>	

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		<p><b>Emerging Areas in IT</b></p> <p>To build and enhance competencies in Emerging Areas of Information Technology</p>				<p><b>Nurturing New Areas</b></p> <p>Ongoing projects in the areas of Smart Cards and RFID will be progressed.</p> <p>Ongoing projects in scientific computing, ubiquitous computing and perception engineering will be progressed.</p> <p>Projects would be initiated to develop technologies for Digital Preservation</p> <p>Projects would be initiated for use of ICT for low carbon emissions.</p>	<p>Adoption of RFID in various applications would increase.</p> <p>Competencies to develop applications in the area would increase.</p> <p>Technologies for preservation of Born digital data would be available.</p>	<p>July 2010</p> <p>October, 2010</p> <p>September, 2010</p> <p>June 2010</p>	
		<p><b>E-Commerce</b></p> <p>The program would result in proliferation of e-commerce in the long run</p>				<p>Expansion of TIDE scheme will be taken-up.</p> <p>Ongoing projects on mobile commerce would be progressed.</p>	<p>ICT for low carbon emissions in specific domains</p> <p>Promotion of start-up companies</p>	<p>Dec 2012</p> <p>March 2012</p>	

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		<p><b>IPR Promotion Programme</b></p> <p><b>IT Research Academy (ITRA)</b></p> <p>To build a National Resource for advancing the quality and quantity of R&amp;D in IT and Electronics</p> <p><b>Bio-informatics Initiative</b></p> <p>To enhance research</p>				<p>Profile of IPR filed and Granted</p> <p>SIP-EIT Scheme to provide support to SMEs for filing International Patent</p> <p>Conduct of Workshops/ Seminars for IPR awareness</p> <p>New projects to be initiated.</p> <p>Establishment of ITRA HQ</p> <p>Identification and initiation of four Participating Institutions.</p> <p>Identification and initiation of eight Research Groups</p> <p>1. Three Centres of Excellence for Research and Training have been established to develop Ss/w tools and</p>	<p>Proliferation of m-commerce in the country.</p> <p>50 IPRs to be filed</p> <p>25 Cases to be Processed.</p> <p>10 Seminars</p> <p>Enhancement of Quality of Research and Education in the country.</p> <p>Generate a pool of Doctorates in IT and Electronics for R&amp;D and academic purposes.</p>	<p>March 2011</p> <p>March 2011</p> <p>March 2011</p> <p>March 2011</p> <p>September, 2010</p> <p>March 2011</p> <p>March 2011</p> <p>Workshop on Immuni-informatics.</p>	

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		capabilities in Bio-Informatics in the country.				databases to help in Genomic Research, Drug Designing and preserving Biodiversity and impart skill set through modular courses and seminars/ workshops.	<p>Sep, 2010</p> <p>Seminar on Computational Biology Sep, 2010</p> <p>Databases and s/w tools for Immune Epitope Prediction and Peptide Binding proteins. Dec, 2010.</p> <p>Development of tissue cell specific prediction program for genes. Mar, 2011</p> <p>Bioinformatics applications for molecular basis of Type2 Diabatics mellitus.</p>		

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						<p>2. Computational Workflow for High throughput Genome Analysis</p> <p>3. Agri-Bioinformatics Promotion Programme, 5 Centres have been set up.</p>	<p>Mar, 2011</p> <p>Conducting Modular courses. Continuing Process</p> <p>Basic Prototype readiness. May, 2011</p> <p>Rules Engine Enhancement. Dec, 2011</p> <p>Testing using Large datasets March, 2011</p> <p>Bio-informatics approaches for identification of Resistant gene in crop Genome- Data collection literature survey.</p>		

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							<p>March, 2011</p> <p>Establishment of databases for Indian Wheat genotypes and DNA based markers in wheat- design and data-collection. March, 2011</p> <p>Insilico Characterization of endangered and rare medicinal plants of Gujrat-database creation. March, 2011</p> <p>Database development and annotation of pigeonpea-data collection,</p>		

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							data updation March, 2011  National Workshop on crop Genomics Jan, 2011  Workshop on Bioinformatics in Plant Reaserch Sep, 2010  Seminar on Agribioinformatics Tools Sep, 2011  Skill set inculcation through training. Continuing Process  Data updating and Curation. May, 2010		
						4. North East Parasite Information and analysis Center - an insilico approach.			

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						5. Development of microbial database of North East India	<p>Beta Release of database and Workshop on Database created. March, 2011</p> <p>Isolation of microbes, biochemical and molecular characterization Aug, 2010.</p> <p>Score sheet preparation and initiation of database. March, 2011</p>		

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4.	<b>Convergence, Communication Broadband and Strategic Electronics</b>	<p>To undertake R&amp;D in Convergence, Communication &amp; Broadband Technologies and Strategic Electronics</p> <p>The outcome of R&amp;D projects will result in establishing capability in emerging technologies bringing economic benefits and e-inclusion, safety, security and improved quality of life.</p> <p>The R&amp;D will lead to excellence in state-of-art technologies, creation of</p>	-	25.00 includes Rs.3.00 crore for NER	-	<p>Initiation of 20-25 projects in development/application of the next generation wired /wireless communication &amp; broadband technologies such as SDR, Cognitive Radio, MIMO, OFDM, Wi-Fi, WiMAX, WSN, UWB, TETRA, Broadband on Power Line, NGN &amp; projects in applications for disaster management, safety, security, surveillance and robotic systems.</p> <p>To arrive at specifications for users suiting to Indian conditions, demonstration and testing of new products and technologies developed.</p> <p>Execution of MoUs and Transfer of Technology (ToTs)</p>		<p>On an average 6 projects in quarter are proposed to be initiated. The projects are generally of 1-3 years duration.</p>	<p>About 20 new project proposals will be processed for approval in the following.</p> <p>There are 25 ongoing projects that are under implementation and are being monitored by respective PRSGs.</p>

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		patents, support productionisation and cost effective deployment for both domestic and international markets.							
5.	<b>Components &amp; Material Development Programme</b>	To support Infrastructure development and R & D projects for the development of Electronic Materials	0.60	25.00	11.10	<p>Development of liquid crystalline polymers</p> <p>Development of lead free x-ray absorbing coating materials for TVs</p> <p>Oxide films and nanostructures for advanced sensors &amp; energy systems</p> <p>Studies on synthesis and characterization of p- type ZnO thin films for electronic paper and spintronix applications</p> <p>Magnetic materials for high-permeability GHz-frequency inductors</p> <p>TMR materials and systems for very</p>	<p>To develop Liquid Crystalline materials and demonstrate one application</p> <p>To develop lead free material for X-ray absorption</p> <p>To develop photovoltaic cell for solar energy conversion</p> <p>To develop p-type ZnO for exploring possible application at e-paper</p> <p>To develop inductors of high permeability and GHz frequency</p> <p>To develop TMR</p>	<p>September 2010</p> <p>April 2010</p> <p>April 2011</p> <p>April 2010</p> <p>March 2011</p> <p>March 2011</p>	<p>Ongoing</p> <p>Ongoing</p> <p>Ongoing</p> <p>Ongoing</p> <p>Ongoing</p> <p>Ongoing</p>

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						<p>high density data storage technology and spintronic devices</p> <p>Synthesis of Nano NTC material and development of chip in glass fast response thermal sensors</p> <p><b><u>New Initiatives</u></b> Preparation of Carbon Aerogel and Development of Aerocapacitor for Electronic Applications</p> <p>Design &amp; Development of Piezoelectric Multilayer Actuator for MEMS based Micro valve</p> <p>Synthesis and Development of Broadband EMI shielding materials using Magneto-dielectric Nanoparticles</p> <p>To initiate new projects on Electronics materials and components</p> <p>Establishment of testing facilities for the hazardous substances as per</p>	<p>materials for information storage, and emerging technology</p> <p>To develop fast response nano NTC sensors</p> <p>To develop the aerogel capacitor</p> <p>To develop Piezoelectric Multilayer Actuator for MEMS based Micro valve</p> <p>To develop Broadband EMI shielding materials using Magneto-dielectric Nanoparticles</p> <p>To establish a centre for testing of hazardous</p>	<p>March 2011</p> <p>April, 2010</p> <p>April, 2010</p> <p>April, 2010</p> <p>September, 2010</p> <p>October 2010</p>	<p>Ongoing</p>
		To support development and							

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		<p>initiatives issues on environmental related of electronics</p> <p>To support R &amp; D projects for the</p>				<p>European Union (EU) Directive of Restricting the use of hazardous substances (RoHS)</p> <p>Development of processing technology for recycle &amp; reuse of electronic waste</p> <ul style="list-style-type: none"> <li>• Installation of FCS Systems at 10 organizations</li> <li>• Holding of second Workshop</li> </ul> <p>Completing the set up for Photo-darkening measurements in high power fiber lasers</p> <p>Make operational the system for Dev of High power fiber lasers by nanoparticle Deposition</p> <p>Implementation of the gain flattening in the system</p> <p>Initiate new projects in the area solid state lighting</p> <p><b>Integrated Electronics Packaging</b> Optimization of lead free solder bumping including bath composition</p>	<p>substances and RoHS certification</p> <p>To develop low cost technology to recycle electronic waste</p> <p>Spreading the base of Biophotonics for Health care</p> <p>Developing technology for High Power Fiber laser by nanoparticles</p> <p>Development of MSA Optical Amplifier</p> <p>Evolution of Green Photonics technology</p> <p>Process for Integrated Glass-Ceramic Packaging</p>	<p>September 2010</p> <p>July 2010</p> <p>Oct 2010</p> <p>April 2010</p> <p>Sept 2010</p> <p>June 2010</p> <p>June 2010</p> <p>March, 2011</p>	

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		development of Electronic Materials				<p>and UBM Selection of appropriate ferrite &amp; dielectric material for LTCC applications</p> <p><b>Nanomaterials and devices</b></p> <ul style="list-style-type: none"> <li>• Optimisation of parameters to obtain nano particles of metal oxides( ZnO and TiO<sub>2</sub>) by Transferred Arc Plasma Reactor</li> <li>• A process for preparation of quantum dots of QDs of Cu<sub>2</sub>Se and Ag<sub>2</sub>Se in various matrices including polymers.</li> <li>• Bi<sub>2</sub>S<sub>3</sub> doped glass-nanocomposites for X-Ray absorption.</li> <li>• BaSO<sub>4</sub>- Polymer nanocomposite for X-ray absorption</li> <li>• Nanostructured CdIn<sub>2</sub>S<sub>4</sub> as a Photocatalyst for hydrogen generation.</li> <li>• Development of n –type and p-type transparent conducting oxide thin films</li> <li>• Development of NTC Thermal sensors.</li> </ul> <p><b>Ultra high purity materials</b></p> <ul style="list-style-type: none"> <li>• Fine tuning and characterization of vacuum refining/ zone-refining of</li> </ul>	<p>Generation of Nano-powders, Nanocomposite &amp; Quantum dots of metals/ semiconductors/ for Electronics Technology and allied applications</p>	<p>March, 2011</p>	
						<p>Process technology/ Pilot plant scale production of ultrapure</p>	<p>March, 2011</p>		

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		<p><b>Photonics</b></p> <p>To nurture photonic technologies relevant in IT and optical communication as well as develop technologies in</p>				<p>gallium.</p> <ul style="list-style-type: none"> <li>Production of 7N Zn after establishing characterization of 6N purity Zn</li> <li>Single crystal high purity Bi crystals of 6N purity.</li> <li>Nanopowder preparation, optimization and subsequent production</li> </ul> <p><b>Materials for Renewable Energy</b> Fabrication of aerogel supercapacitors using carbon aerogel electrodes</p> <p><b>Piezo sensors and Actuators</b></p> <ul style="list-style-type: none"> <li>Development of ML bender actuator</li> <li>Development of novel piezoelectric materials systems for microactuators</li> </ul> <ul style="list-style-type: none"> <li>Installation of FCS Systems at 10 organizations</li> <li>Holding of second Workshop</li> </ul> <ul style="list-style-type: none"> <li>Completing the set up for Photo-darkening measurements in high power fiber lasers</li> </ul>	<p>metals</p> <p>Process for renewable energy material.</p> <p>Process/technology for sensors and actuators.</p> <p>Spreading the base of Biophotonics for Health care</p> <p>Developing technology for High Power Fiber laser by nanoparticles</p>	<p>March, 2011</p> <p>March, 2011</p> <p>July 2010.</p> <p>Oct 2010</p> <p>April 2010</p>	



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		<b>Garuda</b>				<ul style="list-style-type: none"> <li>Shared e-Science resources infrastructure</li> <li>Grid Technology Services for Operational Phase of Garuda</li> <li>Applications of National Importance on Garuda</li> </ul>	<ul style="list-style-type: none"> <li>applications.</li> <li>National Shared e-Science Resource /Cyber infrastructure for providing new type of problem-solving environment / collaboration tools</li> <li>Reliable Grid Infrastructure; Grid Tools and Technologies; Extensive participation of research and application communities; Reduction in lead time for research and technology development</li> <li>Disaster Management, Atmospheric Science, Computer Aided Engineering (CAE), Collaborative</li> </ul>	<p>March 2012</p> <p>July 2012</p> <p>March 2011</p>	



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		<b>Professional Electronics</b>				<p>recognition system, etc. with unique tools for Indian language with key-board standards</p> <ul style="list-style-type: none"> <li>Indian Language browser, speech interfaces Automatic Speech Recognition (ASR) System, Speech engine specific to Indian language</li> <li>Manuscript processing tools</li> <li>Software Defined Radio (SDR) - Phase II</li> <li>Tetra Wi-Max base station prototype.</li> </ul>	<p>with consortia for Indian languages</p> <ul style="list-style-type: none"> <li>Localization of Tools and Technologies for specific to Indian languages</li> <li>Manuscript processing tools for both Sanskrit and Vedic applications</li> <li>Software Communication Architecture (SCA) compliant hardware and waveforms, which can meet the requirements of reconfiguration and portability</li> <li>A system with four carrier TETRA Base Station and a single Wi-max Channel,</li> </ul>	<p>March 2011</p> <p>March 2011</p> <p>Sept. 2011</p> <p>February 2010</p>	

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						<ul style="list-style-type: none"> <li>• Intelligent transportation system</li>   <li>• Development of Advance Hearing Aid technology</li>   <li>• Next Generation Acoustic Land mine Detector</li>   <li>• Application of Digital Image Processing Technologies in Tasar Sericulture</li> </ul>	<p>which would work as a Tetra Base Station</p> <ul style="list-style-type: none"> <li>• Wireless Traffic Control System ; Red light violation detection system; Parking lot management system</li>   <li>• Prototype for Advanced Programmable Hearing Aid</li>   <li>• Indigenous technology for acoustic detection of Land Mines</li>   <li>• Improvement of quality of Tasar yarns produced and Consistency of thickness of spun or reeled yarns</li> </ul>	<p align="center">Jan. 2011</p> <p align="center">March 2012</p> <p align="center">March 2011</p> <p align="center">June 2011</p>	

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Sr. No	Name of Scheme/ Programme	Objective/ Outcome	Outlay 2010-11 (Rs. in crore)			Quantifiable Deliverables/Physical Outputs	Projected Outcomes	Processes/ Timelines	Remarks/ Risk Factors
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		<b>Software Technologies</b>				<ul style="list-style-type: none"> <li>• CPE Based E-Tongue development</li> <li>• Software as a Service (SaaS) Framework</li> <li>• Enhancements to BOSS Linux; Deployment of BOSS Linux in e-Gov and IT@School</li> <li>• e-Governance applications :</li> <li>• Development of new e-Governance products, Solutions.</li> <li>• Replication of already developed e-Governance in the state and central government Departments</li> </ul>	<ul style="list-style-type: none"> <li>• Technology development of assessing taste of Indian tea</li> <li>• Cloud computing middleware and integration of e-Governance applications in the enterprise data centre over the Cloud</li> <li>• BOSS Linux specific to education &amp; scientific domain</li> <li>• To deploy e-solutions, promising transparency, speedy information dissemination, higher administrative efficiency and improved public services</li> <li>• Replication of successful</li> </ul>	<p>March 2011</p> <p>July 2010</p> <p>May 2012</p> <p>March 2011</p> <p>September 2010</p>	

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						<ul style="list-style-type: none"> <li>• Workflow engine for NeGP Projects</li> <li>• Mobile Governance ( including Mobile Health Monitoring)</li> <li>• Digital Preservation &amp; Information Rights Management</li> <li>• Geomatics solutions :                             <ul style="list-style-type: none"> <li>• Forrest Management</li> <li>• ISRO GBP project on Landuse Landcover dynamics of Western Ghat of India</li> </ul> </li> </ul>	implementations, Deployment of good practices and skill sets  <ul style="list-style-type: none"> <li>• An enterprise class workflow engine for multilingual applications</li> <li>• Framework for Mobile Health Monitoring and Disaster management</li> <li>• IRM and preservation for digitally born documents in NeGP</li> </ul> Geomatics based solution for <ul style="list-style-type: none"> <li>• Forest Management,</li> <li>• Landuse and Landcover dynamics</li> </ul>	Dec. 2010   Dec. 2010   Dec. 2010   Dec. 2010 Oct. 2012	

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		<b>Cyber Security and Cyber Forensics</b>				<ul style="list-style-type: none"> <li>• Development of Cyber Forensics tools for embedded systems</li> <li>• Information Security Awareness and Education and Awareness (ISEA)</li> <li>• Face Recognition Engine (FRE)</li> <li>• Malware Prevention System</li> <li>• Cyber-Security in Hierarchical Wireless Sensor Networks for Industrial Applications</li> </ul>	<ul style="list-style-type: none"> <li>• Indigenously developed Cyber Forensics tools for embedded systems</li> <li>• Comprehensive national awareness campaign on Information Security for industry, academia and masses at large</li> <li>• Face Recognition Engine V4.0</li> <li>• Malware Prevention System Prototype is being designed for identified applications on Windows and Linux environments</li> <li>• Protocols and Systems for Cyber-security in IT for Power Systems</li> </ul>	<p align="center">Jan. 2011</p> <p align="center">Mar 2011</p> <p align="center">Oct 2011</p> <p align="center">June 2011</p> <p align="center">March 2011</p>	

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		<b>Medical Health Informatics</b>				<ul style="list-style-type: none"> <li>Enhancement of SDK for DICOM and SDK for HL7</li> <li>Digital Image Structural Analysis and Metadata Extraction for Comparative Image Study Leading to Diagnostics</li> <li>Medical Image Processing System for Automated PAP Smear screening</li> <li>Public Health Information Network (PHIN) compatible outbreak detection and management system</li> </ul>	<ul style="list-style-type: none"> <li>Newer and more capable version of SDK to better suit user community</li> <li>Framework for parameterization, storage, and analysis of radiological images</li> </ul> <p>Medical image analysis system which investigates the cervical smear images for early detection of Cervical cancer</p> <ul style="list-style-type: none"> <li>Public Health Information Network (PHIN) compatible Outbreak Detection and Management System for use in public healthcare institutions which will enable these organizations for early detection and preparedness against</li> </ul>	<p>October 2010</p> <p>March 2011</p> <p>March 2011</p> <p>June 2011</p>	

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			Non-Plan Budget	Plan Budget	Compl EBR (IEBR)				
		<b>Ubiquitous Computing</b>				<ul style="list-style-type: none"> <li>Automated Diagnosis System for Mammograms</li> <li>KM based smart Hospital Management System</li> <li>Distributed HER System</li> <li>Establishment of National Level Ubiquitous Computing Research Resource Centres</li> </ul>	<p>outbreaks</p> <ul style="list-style-type: none"> <li>Mass screening programmes for Breast cancer control programme</li> <li>Clinical Data Repository; Decision Support System for Doctors</li> <li>A Framework for distributed HER system for Nation</li> <li>Adaptive Framework for WSN; Security Framework for Ubiquitous Computing Applications; u-Learning application using GrUb Computing</li> </ul>	<p>March 2012</p> <p>June 2011</p> <p>March 2012</p> <p>October 2010</p>	

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						<ul style="list-style-type: none"> <li>Application development – showcasing ambient assisted living and health care</li> </ul>	<ul style="list-style-type: none"> <li>Prototype Implementations of credible Ubiquitous Computing applications like U-Agri, Smart Parking and Intelligent Intrusion Systems; Subsystem for Aware Home</li> </ul>	March 2011	
7.	<b>Electronics in Health &amp; Tele-medicine</b>	To promote development of medical electronic equipment, rehabilitation devices and Telemedicine Systems.	-	16.00 includes Rs.2.00 crore for NER	-	<p>Establishment of batch fabrication facility for Linac machines</p> <p>Initiation of TOT of indigenously developed medical electronics products.</p> <p>Initiation of projects for deployment of linac machines for cancer treatment.</p> <p>Initiation of new R&amp;D projects in the area of Medical electronics &amp; Telemedicine.</p>		<p>December 2010</p> <p>September 2010</p> <p>February, 2011</p> <p>March 2011</p>	

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8.	<b>Technology Development for Indian Languages</b>	The major objectives of the programme are: (1) To develop information processing tools to facilitate human machine interaction in Indian languages and to create and access to multilingual knowledge resources/content. (2) To promote collaborative development of futuristic technologies leading to innovative products and services.	-	35.00 includes Rs.4.00 crore for NER	-	Machine Translation system , Cross-lingual Information Access System , OCR and OHWR with increased accuracy and performance towards product development  Support for CD user base Percolation of CDs to new spheres . Reviewing of CD Contents & also upgrades of open source regions	Consortium Mode Projects –Phase –II in the areas of Machine Translation , Cross-lingual Information Access , Optical Character Recognition and OHWR  National Roll-Out Plan Phase-II	Sep 2010 / March 2011  Sept. 2010	The phase – II of the consortium mode projects would focus on deployment and improvisation based on the testing and evaluation of the systems developed in phase-I & also Development through continuous feedback

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						<p>To take up for additional languages</p> <p>Research &amp; Development for, promotion and proliferation of Localization in official languages, Dev. Of localization tools showcasing Laboratory etc.</p> <p><b><u>On-Going Projects</u></b> Stake holders consultation and Validation of the following : Script Grammar for 10 Indian languages. Common local data repository for major Indian languages. Language tag representation for all Indian Languages. Consolidation of inputs for internalization in W3C standards namely CSS, PLS, Xforms, XHTML and E-Gov activity.</p> <p>H/W Infrastructure will be setup TDIL website &amp; Data centre front end will be ready.</p>	<p>Automatic Speech Recognition (ASR) and Text-to-speech systems in Indian Languages</p> <p>Establishment of National Localization Research and Resource Centre (NLRRC)</p> <p>Web Internationalization , Standardization and W3C India Initiative</p> <p>Indian Language Technology Proliferation and Deployment Centre</p>	<p>Dec 2010</p> <p>Dec 2010</p> <p>March 2011</p> <p>March 2011</p>	<p>Project Initiation</p> <p>Project Initiation</p> <p>Continuous activity (Project under implementation)</p> <p>Ongoing</p>

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						<p>1. Web Deployment of CLIA system in 5 Indian Languages. (Hindi, Marathi, Tamil, Telugu, Bangla)</p> <p>2. OCR in 6 Indian Languages (Punjabi, Malayalam, Telugu, Tamil, Bangla, Hindi)</p> <p>3. OHWR in 3 Indian Languages (Hindi, Tamil, Kannada, )</p>	<p>Consortium Mode Projects in the areas of Cross-lingual Information Access, Optical Character Recognition (OCR) and On-line handwriting Recognition systems</p>	<p>Sept 2010</p>	<p>Ongoing</p>
					<p>10,000 Synsets in 4 Languages</p>	<p>Development of Word-net for Languages of the North East</p>	<p>March 2011</p>	<p>Ongoing</p>	
					<p>1. POS Tagset standard</p> <p>2. Annotated text corpora of 1 lakh words in 11 Indian Languages</p>	<p>Indian language Corpora Initiative</p>	<p>March 2011</p>	<p>Ongoing</p>	
					<p>Pre Alpha version of Text-to-speech systems for 5 ILs (Hindi, Marathi, Tamil, Telugu, Malayalam)</p>	<p>Development of Text-to-Speech in Indian languages</p>	<p>Dec 2010</p>	<p>Ongoing</p>	
					<p>100 hours of Bodo speech Corpora and IPA representation of Bodo language would be developed.</p>	<p>Development of Bodo Speech Corpora and its IPA representation</p>	<p>Sept. 2010</p>	<p>Ongoing</p>	
					<p>Draft Script Grammar for major Indian languages</p>	<p>Development of Fonts, Keyboard, Script ,</p>	<p>Sep 2010</p>	<p>Ongoing</p>	

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						A generic software develop environment independent of application/platform to support development of versions NLP applications.	Grammar for major Indo-Aryan Languages		
						Pre- alpha version of NLP Dashboard	Dashboard Development Environment for NLP Applications	March 2011	Ongoing
						30 numbers of trained manpower in the area of Language Technology	Human Resource Development in Language Technology	March 2011	Ongoing
						Pre- alpha version of MT System	Development of Sanskrit Computational Tool Kit and Sanskrit-Hindi Machine Translation system	Dec 2010	Ongoing
						Draft CLDR , Fonts, Keyboard layout & drivers for Assamese, Bodo, Manipuri and Nepali	Development of major North-Eastern Languages (NE Consortium)	Dec 2010	Ongoing

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9.	<b>IT for Masses (Gender, SC/ST)</b>	Upliftment of Women folk and SC/ST	-	14.00 includes Rs.2.00 crore for NER	-	<ul style="list-style-type: none"> <li>To conceive and formulate projects for development of Women, SC/ST – through ICT</li> </ul>	Capacity building of Women and SC/ST through infrastructure development, training of target groups in different states/ UTs.	<ul style="list-style-type: none"> <li>3 new projects March, 2011</li> </ul>	
10.	<b>Media Lab Asia</b>	To bring the benefits of the information and communication technologies and other advanced technologies for the benefit of the common man.	-	10.00 includes Rs.1.00 crore for NER	20.00	<p>IT related education &amp; livelihood generation projects in North-East.</p> <p>Completion of ongoing projects</p> <p>Higher order research in following areas-</p> <ol style="list-style-type: none"> <li>R&amp;DI projects</li> <li>Education and Products for the Disadvantaged</li> <li>e-Governance application.</li> </ol> <p>Lab to Land activity for deployment of MLAsia &amp; Third party technologies</p> <p>Generation of IEBR</p>	All the areas mentioned will be acted upon.		

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11.	STQC	Establishment of Quality Assurance Infrastructure in the country to facilitate quality products & services at par with global standards and practices	7.00	85.00 includes Rs.9.00 crore for NER	-	<p>1. Upgradation of Test &amp; Calibration facilities to cater to state-of-the-art products with emerging technologies</p> <p>2 Revenue target realization.</p> <p>3. Upgrade s/w test facilities for e-Governance applications</p> <p>4. To obtain accreditation of S/w Test labs.</p> <p>5. e-Security Standards /guidelines for e-Governance</p> <p>6. Upgrade testing and Auditing facilities for security of Network, systems, applications and websites</p>	<p>Upgradation of test and calibration facility to meet the demand industry.</p> <p>Revenue of Rs. 45 crores approx. likely to be generated.</p> <p>S/w Test Tools for “Mission critical Project” like defense/space will be procured.</p> <p>Kolkatta / Bangalore/other centre to be accredited for Usability Testing.</p> <p>E safe documents / Standards to be prepared for NIC.</p> <p>Tools and skills to be upgraded for better services</p>	<p>March, 2011</p> <p>March, 2011</p> <p>March, 2011</p> <p>March, 2011</p> <p>Dec., 2010</p> <p>March, 2011</p>	

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						<p>7. Common Criteria scheme and testing facilities operationalised to take up new IT products</p> <p>8. Progress of construction activity of STQC Building at Noida.</p> <p>9. Launch of Intermediary scheme for empanelment of external training provider organisations</p> <p>10 .Human Resource Development by conducting DOEACC ‘O’ &amp; ‘A’ level courses in NE region.</p>	<p>CC test and scheme infrastructure established for Indian industry</p> <p>Construction activity of first phase to be completed.</p> <p>Intermediary scheme launched. External organisations started offering STQC training programs to industry.</p> <p>SC/ST/OBC/women / weaker section of society and unemployed youth of NE region will be benefited in Computer field.</p>	<p>March, 2011</p> <p>Dec., 2010</p> <p>June, 2010</p> <p>March, 2011</p>	
<b>12.</b>	<b>STPI &amp; EHTP</b>	To promote exports of electronics & IT.	-	2.50	-	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	To promote exports of electronics & IT.

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13.	e-Governance	The NeGP has been formulated for giving a thrust to e-Governance activities across various arms of government at the national, state and local government level. This approach has the added advantage of enabling huge savings in cost, in terms of sharing the core and support infrastructure; it enables interoperability through standards, which would result in the	-	1030.00 includes Rs.103.00 crore for NER	-	<p><b><u>Establishment of SWAN</u></b></p> <p>To provide 2 Mbps data connectivity up to Block level in all States /UTs in phases. As Part of the ongoing Scheme both leased line and wireless based network would be created across the country.</p> <p>Implementation activities for SWAN for all 29 States and 6 UTs have been initiated. Facility will be in place for 33 States/UTs. Goa and Andman &amp; Nicobar has opted out from the SWAN Scheme as these States/UTs have the Local Network in place.</p>	<p>In general, it is envisaged that it would take nearly 180 days for completing full process of selection of Network Operator for the SWAN. The processes involved in identification of Network Operator are : Selection of Consultant, Preparation of RFP, vetting of RFP, floating of RPF, scrutiny of bids which includes pre-qualification scrutiny, technical evaluation, financial evaluation, identification of Network Operator, conclusion of the contract with the Network Operator etc. Further to this, implementation of network by the designated Network Operator would take</p>	<p>About 23 SWANs are expected to be operational by March 2010.</p> <p>All SWANs are expected to be operational by June 2010.</p>	<p>State Government would leverage the SWAN as a core network infrastructure progressively to provide G2G services and later G2C services (even below Block Hqrs level when last mile connectivity would be made available) whose availability is presently confined to the location of the offices providing these services any</p>

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		citizen having a seamless view of Government.				<p>anywhere between 36 weeks to 52 weeks. After commissioning of the network, the Scheme envisages operation of the network for five years. Currently State/UT SWANs are in the various stages of implementation.</p> <p><b><u>State Data Centres</u></b></p> <p>State Data Centre has been identified as one of the important element of the core infrastructure for supporting e-Governance initiatives of NeGP. The Scheme has been approved by the Government at a total outlay of Rs.1623.20 crore over a period of 5 years. It is proposed to set up Data Centres across 35 different States/UTs in the country during the 11<sup>th</sup> Plan.</p>	<p>Secure and reliable data Repository sharable across various applications.</p> <p>State Data Centre will help in providing efficient electronic delivery of G2G, G2C and G2B services.</p>	<p>SDC Proposals for 31 States/UTs have been approved.</p> <p>Around 12-15 State Data Centres are expected to be set up and operationalised by December 2010. 5 more are expected to be operationalised by March 2011.</p>	where anytime over the entire State

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						<p><b><u>Common Service Centres (CSCs)</u></b></p> <p>The Government has approved a Scheme for establishing 100,000+ CSCs, primarily in rural areas of the country. These Centres would be broadband Internet enabled and would provide all government and private services at the doorstep of the citizen. The Scheme is to be implemented in Public Private Partnership. The Scheme has been approved at a total cost of Rs 5742 crore with Government of India contribution Rs 856 crore and State Governments contribution being Rs 793 crore. The balance funds would be brought in by the private sector.</p> <p>58954 CSCs have been rolled out covering 27 States by December 2009.</p> <p><b><u>Connectivity</u></b></p> <p>Successful implementation of the CSC scheme would also depend upon availability of last mile connectivity i.e. broadband connectivity up to the</p>	<p>Sanction the CSCs proposals for remaining States and UTs in the country.</p> <p>Complete the process of establishment of 100,000+ CSCs in the country</p> <p>Provisioning of broadband connectivity to 100,000+ CSC</p>	<p>June 2010</p> <p>June 2010</p>	<p>Extension for one year without any financial implication</p>

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						<p>village level. Considering the importance, urgency and necessity of implementation of the Last Mile Broadband Connectivity; a two phase plan has been worked out by the Department of IT, GoI in consultation with Department of Telecommunication and BSNL. This is as follows:</p> <p><b><u>Phase –I – Broadband Wire-line connectivity:</u></b> This phase would comprise of provision of wire-line Broadband connectivity to those locations where only BSNL has rural exchanges by upgrading capacity of these exchanges. This would provide broadband connectivity to approx. 30000+ CSCs.</p> <p><b><u>Phase –II – Broadband Wire-less connectivity:</u></b> This phase would comprise of provisioning of wire-less connectivity by BSNL from Blocks/Talukas. BSNL would upgrade existing towers with required wireless base stations and also establish new infrastructure where tower is not available. With this provision another 64,000+ CSCs could be provided Broadband connectivity.</p>			

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						<p><b>Facilitating Services through CSC by enabling Implementation of State Portal, SSDG, EForm Application and Gap Infrastructure</b></p> <p>The scheme of ensuring delivery of services through CSC by enabling the State Portal (SP), State Service Delivery Gateway (SSDG), Electronic form Application implementation and gap infrastructure under NeGP has been approved with a total outlay of Rs. 400 crore. It is envisaged that SP along with SSDG will be developed and implemented so that citizens are provided with outlets where they can access the services under a single interface mechanism in the form of the Portal.</p> <ul style="list-style-type: none"> <li>• This will enable citizens to download forms and submit their applications electronically with help of <b>Electronic Forms</b> hosted on the <b>State Portal (SP)</b> and routed through a common <b>services gateway (SSDG)</b>.</li> <li>• Assured electronic delivery of the request from the citizen to the specified field office of the government department</li> <li>• The electronic acknowledgement of successful submission of application/request from department to the citizen and query</li> </ul>	April 10 - March 11	<ul style="list-style-type: none"> <li>• Selection of Implementing Agencies by States</li> <li>• Completion of project implementation in at least 10 States/UTs</li> <li>• UAT by STQC for 10 States</li> </ul>	

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						<p>the status of his/her application/request at any point of time.</p> <ul style="list-style-type: none"> <li>• A single gateway for information and citizen services for integrated service delivery by online public services to the citizen via State Portals</li> <li>• A front end application mechanism through e-Forms</li> <li>• All public service forms in an ‘e’ repository</li> </ul> <p><b><u>e-District</u></b></p> <p>e-District as a concept proposes integrated and seamless delivery of citizen services by district administration through automation of workflow, backend digitization, integration and process redesign across participating departments for providing services to the citizens.</p>	<p>1. Implementation of e-District pilot in 14 States (37 Districts) already sanctioned.</p> <p>2. Obtain financial approvals for the e-District Mission Mode Project Scheme</p>	<p>April 2010</p> <p>April 2010</p>	

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						<p>3. Implementation of (approved) e-District Scheme in 14 States where Pilots would have been completed</p> <p><b><u>e-Bharat:</u></b></p> <p>To support NeGP, GoI has been carrying out dialogue with World Bank for possible programme management and financial support (called “e-Bharat project”). This project is expected to finance a subset of NeGP activities (Mission Mode Projects (MMPs) and Program Components) as agreed between GoI and the World Bank. The Bank’s support under this project is being envisaged through a succession of project financing. For GoI, this is proposed to be an IBRD loan, passed on to states and other implementing agencies as grants, subject to their adherence to agreed guidelines or “Rules of Engagement”. Further, the project design being contemplated by DIT in this regard focuses on a</p>	<p>The project is expected to contribute to:</p> <ul style="list-style-type: none"> <li>i. Improving government’s effectiveness;</li> <li>ii. Empowering marginalized communities;</li> <li>iii. Increasing fiscal revenues;</li> <li>iv. Reducing public procurement costs; and</li> <li>v. Promoting private sector-led growth through PPPs.</li> </ul>	<p>March 2011</p> <p>Discussions with respect to funding mechanism and project design are currently underway.</p> <p>World Bank to complete appraisal of the project followed by approval and negotiation by both GoI and the Bank.</p> <p>Considering</p>	

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						<p>“framework” approach implying that the precise subprojects and States to be financed under the project would be identified by the borrower (i.e GoI), as NeGP program unfolds.</p> <p><b><u>Capacity Building</u></b></p> <p>Institutional Capacity Building for all the States/UTs..</p> <ol style="list-style-type: none"> <li>1. Recruitment of SeMT for all States/UTs</li> <li>2. Orientation of political and policy level personnel’s (Leadership Meet)</li> <li>3. Specialized training to project level officials of all States/UTs</li> </ol> <p><b><u>GIS Application</u></b></p> <ol style="list-style-type: none"> <li>1. Initiation of New project</li> <li>2. Completion of some ongoing activities</li> </ol>	<p>Setting up of SeMT in States/UTs</p> <p>Create awareness about e-Governance at policy and political level</p> <p>Training to Sr. officials, policy maker and SeMT</p> <p>Developing spatial decision support system</p>	<p>the progress so far, it is difficult to arrive at expected timeframe.</p> <p>Continuous activities</p> <p>Continuous activities</p> <p>Continuous activities</p> <p>September 2010</p> <p>Continuous activities</p>	

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						<p><b><u>Standards for e-Governance</u></b></p> <ul style="list-style-type: none"> <li>• Development and enhancement of Standards, Guideline, Policy in identified areas of concern</li> <li>• Development of standards in the new areas</li> <li>• Publishing of standards on the website</li> </ul> <p><b><u>India Portal</u></b></p> <ul style="list-style-type: none"> <li>• Content Enhancement</li> <li>• ISO Certification</li> <li>• Promotion of Portal</li> </ul>	<p>Ensure Interoperability, integration &amp; seamless data sharing of eGov applications</p> <p>Release of standards/ guidelines in Interoperability, Data &amp; Metadata, Security, Localization, Quality &amp; other new areas that emerge</p> <p>Seamless search of govt. information available at the central and state levels and will facilitate Single sign-on to various govt. services and information in turn making citizen interface much simpler and easy.</p>	<p>By September, 2010</p> <p>September 2010</p>	

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						<p><b>National e-Governance Service Delivery Gateway (NSDG)</b></p> <p>NSDG is a middleware infrastructure, would act as standards based routing and a message switch de-linking the back end departments from the Front-end service access providers. This would facilitate standards based interoperability and integration to existing and new e-governance applications. A pilot implementation has been successfully developed and tested. The National Gateway is implemented by CDAC and is Live since Aug'08</p> <ul style="list-style-type: none"> <li>• Operations and Maintenance for 5 years</li> <li>• To be plugged into various e-Gov projects</li> </ul> <p><b><u>Conformity Assessment Centre</u></b></p> <p>DIT, under this project, is creating 7 IT centers (region-wise) in terms of skills, knowledge and experience with technical in the areas of Information Security, Software</p>	<p>This soft infrastructure which is based on standards will facilitate integration, interoperability and data sharing amongst various e-Governance application.</p>	<p>Go-Live done in Aug'08. Proposed to be launched by 1<sup>st</sup> Quarter of 2010 - 2011</p>	
						<p>Will help to scale up e-Gov Implementations in India and generate confidence</p>	<p>On-going</p>		

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						<p>Quality, IT Service Quality etc. These centers will provide Audit, Compliance and Certification Services to various e-Governance applications. The project is being executed by STQC.</p> <ul style="list-style-type: none"> <li>• Continuation of service provisioning to various e-Gov Project at Centre and State Levels</li> <li>• Release of Conformity Assessment framework and the Quality Assurance framework</li> <li>• Organizing three to four workshop on Quality e-Governance</li> </ul> <p><b><u>R&amp;D in e-Governance</u></b></p> <p>To support research and development activities in various areas where R&amp;D will bring direct benefit.</p>	Applied R&D which would enable bringing innovative solutions which are cost-effective for the various e-Governance applications	Continuing activity	In FY 2009-10, supported technology development efforts in Indian languages.

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						<p><b>Open Technology Centre (OTC)</b></p> <p>GOI has initiated the setting up of an Open Technology Centre through NIC aimed at giving effective direction to the country on Open Technology in the areas of Open Source Solutions, Open Standard, Open Processes, Open Hardware specifications and Open Course-ware. The OTC will provide the requisite support to the Standardization activity for e-Governance.</p> <ul style="list-style-type: none"> <li>• To provide synergy to the overall components of Open Technology initiative that are being taken by various communities</li> <li>• To strengthen the support on the Open Technology</li> <li>• To provide the requisite support to the Standardization activity for e-Governance.</li> </ul>	<ul style="list-style-type: none"> <li>• OTC to form Help-Desk Mechanism for NeGP on Prioritized Open Source Stack</li> <li>• Support for hand holding services for using Open Source Software in eGovernance Project</li> <li>• Help to launch 1 e-Gov Portals / Applications which are compliant with Web Accessibility Standards</li> <li>• A Document and Reference for migration/porting of legacy applications to Open Technology</li> <li>• A Handbook on “Open Technology”</li> <li>• Coordination with Six Technology Standards Expert Committees to prepare and update reports on the</li> </ul>	<p>April 2010 onwards - Continuing activity</p>	

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						<p>identified area</p> <ul style="list-style-type: none"> <li>• A Document on Guidelines to select matured libraries and tools in consultation with various stakeholders for Open Source Solutions, which are to be used in e-Governance Applications</li> <li>• Conformance Lab for Compliance with prioritized Open Technology Standards for e-Governance</li> <li>• Augmenting additional manpower of about 5 Trained NIC-Experts and about 25 Research Scientists</li> </ul> <p><b>Assessment</b></p> <p>This programme is basically the Impact Assessment Studies of e-Governance projects and the e-Readiness survey of India.</p>			
						<ul style="list-style-type: none"> <li>• Impact Assessment of 20 projects across at least 2 MMPs of mature</li> </ul>	2010-2011		

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						<p>The impact could be in terms of quality of life, inclusion, access to information regarding benefits etc., economic in terms of either income generation or savings or even empowerment in terms of transparency, Right to information etc. An impact assessment of these e-initiatives will aid in gaining an empirical insight into issues relating to the dynamic and organic nature of governance such as how these projects are perceived and services accessed by the citizen and their services accessed by the citizen and their effect on him as an individual as also on the politico cultural environment which sustains the project.</p> <p>A comprehensive list of e Government projects will be prepared to gain a bird's eye view of e Government projects in the country.</p> <p><b><u>Awareness &amp; Communication</u></b></p> <p>National Awareness Campaign for NeGP</p> <ul style="list-style-type: none"> <li>To create awareness among citizens about the initiative and its</li> </ul>	<p>projects</p> <ul style="list-style-type: none"> <li>Baseline Assessment of 5 projects across at least 1 MMP</li> <li>Detailed Assessment of 2 MMPs in liaison with relevant line-ministry.</li> <li>E-Readiness Assessment 2009-10 to be commissioned</li> </ul> <p>Create awareness at the national level through a campaign on various aspects/components of</p>	2010-2011	

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						<p>objectives</p> <ul style="list-style-type: none"> <li>• To build distinctive brand of NeGP to be utilized across Departmental communications</li> <li>• To motivate other external stakeholders</li> <li>• Workshops and Seminars at MMPs /State/Divisional level</li> </ul>	<p>NeGP in India. Educate the common man on the vast potential of e-Gov and encourage him to avail the benefits of the same.</p> <p>Collaterals reaching out to people across urban fringe and rural locations.</p> <p>To promote e-governance among top level political and bureaucratic setup and other sectors like industry, academia and NGOs.</p> <p>Awareness at State level in departments other than IT depts., important issues with respect to faster rollout of e government projects. Divisional seminars will facilitate awareness at grass root level e.g. SDAs, NGOs, VLEs, SCAs</p>		

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14.	<b>Cyber Security (incl. CERT-In, IT Act)</b>	Security Policy, compliance & assurance	-	40.00 includes Rs.4.00 crore for NER	-	Improvement in security posture of organisations and enhancement in the ability of IT systems and networks to resist cyber attacks.	<p>Implementation of Security Best Practices – ISO 27001 in Govt. &amp; critical sector</p> <p>Implementation of cyber security Crisis Management Plan (CMP) in Central Govt. Ministries/Deptt. as well as States/UT</p>	<p>Ongoing.</p> <p>Status of compliance to be ascertained at periodic intervals. A document for securing Linux, Windows 7, Vista, SQL to be prepared.</p> <p>Ongoing,</p> <p>Periodic cyber security drills to be conducted to verify security posture and compliance. Crisis Management Plan to be updated.</p>	

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		Security training – basic awareness as well as advanced				<p>Cyber Security conformity Assessment Infrastructure (Product, Process &amp; People)</p> <p>Establishment of Common Criteria (CC) product testing facility and certification scheme.</p> <p>Specific training facilities, training modules and content development</p> <p>Awareness and training programmes to facilitate information sharing to deal with crisis situations.</p> <p>Research and development of indigenous cyber</p>	<p>Ongoing,</p> <p>Empanelment activities to be conducted at periodic intervals</p> <p>Ongoing,</p> <p>Upgradation of facility to level 4 testing is planned</p> <p>Ongoing</p> <p>Ongoing</p> <p>Ongoing.</p> <p>Formulation of</p>		
		Security R&D for indigenous skills & capabilities				<p>Trained manpower to implement techniques to secure IT infrastructure.</p> <p>Trained manpower to collect, analyse and process digital evidence.</p> <p>Pre-trained manpower will help in securing cyber space and check cyber crimes.</p> <p>Development /enhancement of skills and expertise in areas of cyber security</p>			

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		Security incident – early warning and response (CERT-In)				<p>Enhancing the security of communications and information infrastructure in the country</p>	<p>security solutions, proof of concepts and prototypes and skilled manpower in areas of cyber security including</p> <ul style="list-style-type: none"> <li>• Crypto Analysis &amp; Research</li> <li>• Authentication</li> <li>• Network &amp; System Security                             <ul style="list-style-type: none"> <li>- Mobile</li> </ul> </li> <li>• Monitoring &amp; Forensics</li> <li>• Vulnerability</li> </ul> <p>through sponsored projects at recognized R&amp;D organisations.</p> <p>Rapid response, resolution and recovery</p> <p>Security incident prediction, prevention and protection</p> <p>Security assurance</p>	<p>proposals with special focus on mobile security, network and system security assurance, enterprise forensics &amp; evaluation of proposals by Working Group</p> <p>Periodic review of individual projects</p> <p>Ongoing. Continuous upgradation of CERT-In facilities and capabilities to counter growing cyber</p>	

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							security threats. Facility for collection of samples and analysis for anti-virus signatures.  Realtime Malware tracking and analysis with special focus on virus/bots.  Real time response to cyber security incidents  Alerts, Advisories and vulnerability Notes  Cyber Security Mock drills  Cyber		

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		Cyber laws for supporting E-Commerce and E-Governance activities				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.	<p>Legal Framework that can effectively support growth of E-Commerce and E-Governance in the country.</p> <p>Operation and maintenance of Cyber Appellate Tribunal</p>	<p>Forensics – comprehensive manual of procedures for cyber crime investigation to be prepared.</p> <p>Ongoing,</p> <p>Rules pertaining to additional sections to be formulated</p> <p>Ongoing,</p> <p>Awareness programmes for adjudicating officers to be organized. National, Regional and State level seminars proposed.</p>	

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15.	<b>Controller of Certifying Authorities (CCA)</b>	To Promote use of electronic/ digital signatures for e-governance and e-commerce applications  Training of Law Enforcement, Judiciary and Other users	-	9.00	-	Promotion of use of Electronic/Digital signature Certificates		On-going	
16.	<b>ERNET</b>	1. To provide network infrastructure to connect Educational & Research Institutes to each other as well as to the rest of the world. 2. To carry out research in collaboration with	-	10.00	72.00	1. Upgradation of Technology & capacity of ERNET Network & extension to South Asian countries through TEIN3, Creation of additional PoP in North East.  2. Work on mobile IPv6 Project and New R & D initiatives.  3. Connecting schools under KVS, ICT Vocational Centre for disabled children.	Delivery of connectivity and networking services at Educational & Research Institutes to promote collaboration at National & International level.	One year	

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		partner institution at national and international level.				<p>4. Setting up of centralized secure Data Centre and intranet of 274 ICAR institutes.</p> <p>5. Continuation of R&amp;D initiative with EU through EU-India Grid 2 and other projects.</p> <p>6. Continuation of Digital Library Initiatives.</p>			
17.	<b>Promotion of Electronics / IT Hardware Mfg.</b>	Promotion of Hardware Manufacturing in the country.	-	2.50	-	<p>Supporting the setting up of Semiconductor Fabrication and other micro and nano technology manufacture industries in the country under SIPS.</p> <p>Conducting Studies and preparation of Position Papers related to promotion of Electronics/IT Hardware manufacturing.</p>	This would encourage investment in electronics/IT hardware manufacturing sector	March 2011	The actual manufacturing units taking off the ground will depend on market condition. Further, the disbursement of subsidy to the selected applicant(s) will depend on their attaining financial closure, crossing the threshold of NPV and other conditions.

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18.	DOEACC	To carry out HR Development in Information Electronics & Communications Technology (IECT). To produce quality professionals through Long Term & Short Term Courses in the Formal & Non-Formal Sector.	1.70	10.00 includes Rs.3.00 crore for NER	79.51	<p><b>(a) DOEACC Scheme</b> O/A/B &amp; C Levels (Non-Formal Sector of a) IT Education &amp; Training) Half Yearly Examinations. -20,000 students are expected to qualify at various Centres of courses during the year 2010-11.</p> <p><b>b) DOEACC Centres</b> to conduct training for Formal Sector Long Term Courses (M.Tech, MCA, BCA, PGDCA, Diploma in EE &amp; CS etc.) – 1,700 students</p> <p>To conduct training for Non-Formal Sector Long Term Courses</p>	<p>IT Trained Professionals will be available for the industry for employment and will be contributing to the economy.</p>	<p>July 2010 &amp; January 2011</p> <p>Conduct Examination &amp; Issue Certificates</p> <p>Annual / Semester wise exams</p> <p>Annual / Semester wise</p>	<p>Recognition of course other than O/A/B/C Courses and courses affiliated to State Universities being offered by DOEACC Society and its Centres.</p> <p>Acceptability of the DOEACC qualifiers by the Industry.</p> <p>M. Tech, MCA, BCA, PGDCA courses are affiliated to respective State / Universities.</p>

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						<p>(DOEACC O/A/B Level courses, DOEACC Bioinformatics O/A Level courses, Hardware Courses at O/A Level – 13,500 students.</p> <p>Training for Short Term courses of duration less than one year – 11,500 students.</p> <p>ITES/BPO Programme - 1800</p> <p>IT Literacy Programme (CCC) – 90,000</p>		<p>exams</p> <p>Batch-wise exams</p> <p>Quarterly exams</p> <p>Quarterly exams</p>	Tailor made to requirement of end-user.
19.	<b>Manpower Development (including Skill Development in IT)</b>	E-learning	-	113.00 includes Rs.25.00 crore for NER	-	<p>Design and Development of Service Oriented Architecture based Standards Compliant e-Learning Framework with Personalized Learning Features - to develop an intelligent e-learning system catering to personalized learning complying with standards, using technologies like service oriented architecture (SOA), web mining and Rich internet applications (RIA).</p> <p>Design and Development of a Framework for Adaptive Instruction (FAI) – to deliver instruction in personalized manner, to</p>	<ul style="list-style-type: none"> <li>E-learning standard compliant tool with support to Personalized learning</li> <li>An integrated conversion tool for creating SCORM compliant content</li> <li>Integrated video streaming capability</li> </ul> <p>Creation of an environment that presents learning material depending on</p>	<p>Nov., 2011</p> <p>Dec., 2011</p>	

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		Human Resource Development in the country in the area of Information Security.				<p>set up FAI server, to provide Indian language support.</p> <p>Real Time Video Compression and Decompression techniques - to improve latency and performance of video compression and decompression techniques based on standard H.264 for lower bandwidths (below 128 kbps) and to provide better quality of video and audio at lower bandwidths and lesser latency for e-Learning.</p> <p>Fresh project proposals for E-Learning in the area like development of authoring tools, Video Compression/ decompression techniques, developing content independent of Platform and environment, Personalized Learning and content management system etc. will be invited from various academic institutions, R&amp;D labs etc.</p> <ul style="list-style-type: none"> <li>• Launching/ continuation of Information Security Curriculum at B.Tech/ M.Tech/ Ph.D levels and train System Administrators;</li> <li>• Establishment of Information</li> </ul>	<p>the learner model and preferences</p> <ul style="list-style-type: none"> <li>• To improve codec standard H.264 or to develop video compression and decompression (codec) standard for better quality of video such as 128 kbps.</li> </ul> <p>Generate qualified IT security professionals for Industry/ Govt.</p> <p>Human Resource</p>	<p>Dec., 2011</p> <p>March 2011</p>	

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		Scheme of Manpower Development for the Software Export Industry				<p>Security labs at RCs and PIs;</p> <ul style="list-style-type: none"> <li>• Training faculty of Participating Institutes;</li> <li>• Train Central and State Government Officers; and</li> </ul> <p>Awareness Programmes in the area of Information Security.</p> <ul style="list-style-type: none"> <li>• Creation of course curriculum, Contents and Question Bank</li> <li>• Generation of quality faculty and mentors</li> <li>• Upgradation of skills of graduates to make them employable</li> <li>• Augmentation of infrastructure facilities for ICT training to enhance the intake capacity</li> <li>• Expansion of state-of-the art facility for advanced (industry related) IT training programmes</li> <li>• National On-line Test System for Graduate Engineers in Information</li> </ul>	<p>Development and awareness in the area of Information Security.</p> <p>Secured environment for BPO, Commerce and governance</p> <p>Human Resource Development in the area of Information Technology for software export industry</p> <p>Generation of Mentors/quality Faculty</p> <p>Enhancement of quality of ICT education in Engg. Colleges</p> <p>Virtualization of Technical Education in</p>	March 2011	

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		Human Resource Development in the North-Eastern Region				<p>Technology</p> <ul style="list-style-type: none"> <li>Regional Institutes for e-Learning and Information Technology (RIELIT) at Kohima (Nagaland) and Agartala (Tripura)</li> <li>New DOEACC Centres at Shillong (Meghalaya), Gangtok (Sikkim) and Itanagar (Arunachal Pradesh)</li> </ul>	<p>IT</p> <p>National On-line Test System for Graduate Engineers in Information Technology</p> <p>Create skilled manpower in the area of Computer Science and Information Technology and related disciplines for making available industry ready professionals and also cater to the needs of the respective state and the region as a whole.</p>	<p>March 2011 (RIELIT Kohima)</p> <p>March 2012 (RIELIT Tripura)</p> <p>Dec 2012 (DOEACC Shillong)</p> <p>July 2013 (DOEACC Gangtok)</p> <p>January 2014 (DOEACC Itanagar)</p>	

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		Digital Library Initiatives – Digitization / preservation and web enabling of Copyright free data available in physical form				<p><u>On-going Projects</u></p> <p>Digitize: - 10-15 Million pages</p> <p>Providing bandwidth connectivity to IISc., IIIT, Hyderabad and C-DAC, Noida</p> <p>Hosting the DLI web site for accessing the digitized data</p> <p><u>New projects</u> Digitize around 20 Million pages</p>	<p>Strengthen Country’s identity by digitally preserving the national heritage and intellectual output</p> <p>Strengthen Country’s identity by digitally preserving the national heritage and intellectual output</p>	<p>March 2011</p> <p>March 2011</p>	<p>- Digitized 11.5 Million pages and 17,784 images</p> <p>- recorded 205 hours of audio/video and 4 Walkthroughs</p> <p>- Connectivity provided to nodal centers</p> <p>- Data hosted on DLI web site</p> <p>- 3 New projects have been initiated for digitization</p> <p>- one new project initiated for setting up of a repository and providing connectivity</p>

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## Financial Outlays &amp; Projected Physical Outputs/Outcomes

Sr. No	Name of Scheme/ Programme	Objective/ Outcome	Outlay 2010-11 (Rs. in crore)			Quantifiable Deliverables/Physical Outputs	Projected Outcomes	Processes/ Timelines	Remarks/ Risk Factors
			Non-Plan Budget	Plan Budget	Compl EBR (IEBR)				
20.	<b>Facilitation of Setting up of Integrated township</b>	Information Technology Investment Regions (ITIR) scheme has been notified in the Gazette of India under which each State in India can set up an integrated township with world class infrastructure for facilitating growth of IT/BPO and Sunrise Industries.	-	1.00	-	IT cities of world class quality of life in different States/UTs.		2009-2014	
21.	<b>Headquarter</b>	<ul style="list-style-type: none"> <li>• Secretariat &amp; Bldg.</li> <li>• Foreign Trade</li> <li>• Exhibitions</li> <li>• Others - Seminars/ Workshops</li> </ul>	27.30 0.80 3.10 0.50	35.00	-	<ul style="list-style-type: none"> <li>• To meet running expenditure of the Secretariat and Plan Schemes</li> <li>• CST re-imbursement of STPI units</li> <li>• To organise exhibitions abroad for promotion of Trade</li> <li>• To organise seminars/workshops for development of electronics in IT</li> </ul>	<ul style="list-style-type: none"> <li>• To run office smoothly.</li> <li>• Export promotion</li> <li>• Trade promotion</li> <li>• Development of electro-nics in IT</li> </ul>		

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## Financial Outlays &amp; Projected Physical Outputs/Outcomes

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			Non-Plan Budget	Plan Budget	Compl EBR (IEBR)				
22.	<b>National Informatics Centre (NIC)</b>	Provide wide range of E-Governance infrastructure and services in the Country at various levels right from Central Government, State Governments to district administrations in their initiatives towards providing good Governance to the people.	-	700.00 includes Rs.72.00 crore for NER	-	<p><b>Cyber Security</b></p> <p>Network and application security audit, Co-relation of security events, Expansion of help desk facility for secure coding and source code scanning.</p> <p><b>Certifying Authority</b></p> <p>Setting up of new Registration Authorities (RA)</p> <p>Provision for additional Redundancy for continuity &amp; minimum downtime.</p> <p><b>Computerisation of Land Records</b></p> <p>Integration model of Land Record, Registration and Cadastral maps</p> <p>Customization of Bhunaksha software for the Northern States</p>	<p>Enhanced security on NICNET.</p> <p>DSC Subscribers will be serviced by new RA office in selected states</p> <p>Procurement of H/W &amp; S/W for additional system redundancy</p> <p>Enhanced Usability, optimization of application</p> <p>Software will become useable as per user requirement and environment.</p>	<p>March, 2011</p> <p>March, 2011</p> <p>March, 2011</p> <p>December, 2010</p> <p>March, 2011</p>	

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## Financial Outlays &amp; Projected Physical Outputs/Outcomes

Sr. No	Name of Scheme/ Programme	Objective/ Outcome	Outlay 2010-11 (Rs. in crore)			Quantifiable Deliverables/Physical Outputs	Projected Outcomes	Processes/ Timelines	Remarks/ Risk Factors
			Non-Plan Budget	Plan Budget	Compl EBR (IEBR)				
						<p><b>Videoconferencing infrastructure development</b></p> <p>Web based HD VC system</p> <p>Augmentation of VC infrastructure</p> <p>Multipoint VC infrastructure</p> <p><b>India Image</b></p> <p>Augmentation of Comprehensive WWW Service</p> <p>Website Design and Development Infrastructure</p> <p><b>Remote Sensing &amp; GIS</b></p> <p>GIS ICT Infrastructure, Deployable GIS data Meta Data Raster as well as Vector GIS Services over NICNET for E-governance &amp; planning</p>	<p>Availability of HD service over Internet/Intranet</p> <p>Availability of better VC facility.</p> <p>Availability of better quality VC service.</p> <p>Enhanced Web services.</p> <p>Facilitate development of web sites using state-of-the-art technology.</p> <p>Customized GIS data products and services over NICNET for E-governance &amp; Planning.</p>	<p>Procurement September, 2010</p> <p>Procurement December, 2010</p> <p>Procurement January, 2011</p> <p>Procurement October, 2010</p> <p>Procurement December, 2010</p> <p>Procurement March, 2011</p>	

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## Financial Outlays &amp; Projected Physical Outputs/Outcomes

Sr. No	Name of Scheme/ Programme	Objective/ Outcome	Outlay 2010-11 (Rs. in crore)			Quantifiable Deliverables/Physical Outputs	Projected Outcomes	Processes/ Timelines	Remarks/ Risk Factors
			Non-Plan Budget	Plan Budget	Compl EBR (IEBR)				
						<p><b>Utility Mapping Project</b></p> <p>Basemap updation of Delhi City, Field Data Photogrammetry data Digital Basemap data</p> <p><b>Data Centre</b></p> <p>Data Centre at Pune</p> <p>Data Centre at Delhi &amp; Bhubneshwar</p> <p>Procurement of Remote management devices.</p> <p><b>High Speed Terrestrial Circuits</b></p> <p>150 Districts will have 34 Mbps connectivity.</p>	<p>Basemap updation for roads of North Delhi</p> <p>Availability of increased Data Centre facility for e-governance projects.</p> <p>Establishment will be initiated.</p> <p>Facilitate remote management of servers hosted at DC by respective departments. Hence increasing convenience and efficiency.</p> <p>Increase of connectivity capacity and Bandwidth</p>	<p>Data collection/ updation March ,2011</p> <p>Procurement March, 2011</p> <p>Procurement March, 2011</p> <p>Procurement October, 2010</p> <p>Procurement March, 2011</p>	

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			Non-Plan Budget	Plan Budget	Compl EBR (IEBR)				
						<p>300 Districts will have STM1 channaelised connectivity to extend last connectivity</p> <p><b>NICNET International Gateway project</b></p> <p>Gateway Bandwidth will be upgraded to 4 Gbps and 2 additional gateways will be installed at Mumbai and Chennai</p>	<p>Better monitoring and minimization of downtime for lastmiles and quality of services.</p> <p>Enhanced and efficient availability of Internet Services</p>	<p>Procurement March, 2011</p> <p>Procurement March, 2011</p>	
23.	<b>National Knowledge Network (NKN)</b>	The objective of the National Knowledge Network is to bring together all the stakeholders in Science, Technology, Higher Education, Research & Development, and Governance	-	100.00 includes Rs.10.00 crore for NER	-	<p>NKN will interconnect all institutions engaged in research, higher education and scientific development in the country, over a period of time.</p> <p>The output of the project will be a high capacity countrywide Infrastructure at education &amp; research Institute level, which will be available 24x7 to support education and research application, and other application as envisaged by these institution which require very high bandwidth.</p>	The NKN will facilitate the knowledge sharing, collaborative research, countrywide classrooms (CWCR) etc. and help the country to evolve as Knowledge Society. This will also contribute in socio-economic activities of the country indirectly.	-	<u>*Final Phase</u> The process of approval of Cabinet note is under progress.

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		with speeds of the order of gigabits per second coupled with extremely low latencies; through PoPs in the respective institutions/ organisation.				<p><b><u>Final Phase*</u></b></p> <p><b><u>Revised Target for 2009-10* (for Jan to March 2010)</u></b>            Complete Garuda Migration            Connect 33 institutions more by March 2010            Virtual Classrooms in all the IIT's            Gateway /Indo EU link establishment            To move from Initial Phase to Final Phase</p> <p><b><u>Target for 2010-11</u></b>            CORE BACKBONE : 34 Locations            Approximately 78, 10Gbps links            End nodes 500- 550 locations.            Enhancement of Infrastructure at various PoPs.            Create a Test-bed Infrastructure for research support.            Starting Data Centre Setup with few services.            Model Projects.            International R&amp;D Connectivity &amp; Internet Gateways.</p>			