

Sr. No	Name of Scheme/ Programme	Objective/ Outcome	Outlay 2012-13 (₹ in crore)			Quantifiable Deliverables/Physical Outputs	Projected Outcomes	Processes/ Timelines	Remarks/ Risk Factors
			Non-Plan	Plan Budget	Comp IEBR				
1.	Society for Applied Microwave Electronics Engineering & Research (SAMEER)	Research & Development activities in the areas of its expertise such as Medical linear accelerators, atmospheric and radar based instrumentation, Communications, RF, Microwave and Millimeter wave technology, Photonics, antennas, EMI/EMC and allied areas	3.00	42.94	39.00	R&D in Core Areas Research leading to expertise in:- Altimeter range measurement system	Hardware development for test bench	March, 2013	
						Synthetic aperture radar at C/X band	System at C/X band as technology demonstrator	March, 2013	
						Development of THz technology for imaging and spectroscopy	Technology for THz imaging and spectroscopy	March, 2013	
						Development of high resolution imaging system using Optical Coherence Tomography (OCT).	OCT for bio-imaging application	March, 2013	
						Development of high power solid state amplifier. zxs	Technology development	March, 2013	
						Development of Gyrotron subsystems	Subsystem design and development	March, 2013	

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						Studies on control of intra-system Electromagnetic Interference (EMI) for System on Packaging (SOP).	Analysis of intra system EMI problems in mixed signal systems	March, 2013	
						Development of vacuum assisted RF dryer	Vacuum assisted RF dryer system	March, 2013	
						Development of secured communication system	Development of Code Division Multiple Access (CDMA) based secured communication system qualified for EMC and environment standards	March, 2013	
						Design of ultra wide band antennas	UWB Antenna design	March, 2013	
						Electronic portal imaging system	Development of Image processing algorithms and image processing system	March, 2013	

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						Millimeter wave radiometer	System development	March, 2013	
						Indigenous digital ionosonde for ionospheric studies	System development (including, design, development of Hardware,- Software, integration of the system and testing)	October, 2012	
						Technology development by implementation of active aperture in mini Radar	System development and evaluation	Sept.,2012	
						Development of GaAs based quantum infrared detectors in the transmission window of 8-12 micron	Technology development for QW infrared detector	March, 2013	
						Growth of III-V multi-junctions by MBE	Multi-junctions material growth	March, 2013	
						Microwave moisture measurement system for bulk materials	Setting up of measurement facility	March, 2013	

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						W band components development	Design fabrication and testing of switches, mixers, LNA, TR module components	March, 2013	
						Gain Characteristics of Antennas	Theoretical & experimental investigation	March, 2013	
						Design and development of folded reflect array antenna	Folded reflect array antenna development	March, 2013	
		To engage in product development driven by technology and user requirement				Development of ST radar at 200 MHz	State-of the art atmospheric radar for getting wind profiles up to 16-20 kms	March, 2013	
						High power transmitter	High power CW system	Installation, tuning of high power sources with cavities, system maintenance March, 2013	

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						Development of hand held data logger for acquiring and processing surface observations at synoptic intervals	Hand held data logger development	Design and development of embedded software March, 2013	
						Development of S-band TT&C transponders	TT&C transponder development	Fabrication and testing of transponders March, 2013	
						Research on Left Hand Maxwell (LHM) system	Fabrication of new metamaterial structures and experiments	January, 2013	
						Design and development of millimeter wave coherent transceiver	Engineering of millimeter wave modules and prototype system demonstration	March, 2013	
						Development and supply of S/Ka band telemetry antenna system	Antenna at S/Ka band	Design and development t June, 2012	

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						Modeling and simulation of MMW transceiver	Simulation studies for imaging application	March, 2013	
						Development of mm wave antennas	Fabrication and testing of millimeter wave antennas	March, 2013	
						Development of Dual Photon and multiple electron energy medical Linac	Advanced version of integrated oncology system	Design, development prototype, carryout user acceptance tests and make engineering model fit for transfer of technology for bulk production Feb., 2013	

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						Development and deployment of 6 MV Medical linac under Jai Vigyan Project (Phase II)	Development and deployment of units at the identified hospital TOT to industry & training	Installation and commissioning in hospitals December, 2012	
		To provide test and measurement services and to undertake training and consultancy in areas of core competence.				Test, measurement and Design consultancy services Calibration and reference to support EMI test instrumentation Conduct training and consultancy and guiding students to carry out projects for their engineering degrees.	600 test assignments for EMI/EMC and 10 test assignments for thermal design and analysis. Training of manpower	Analyze the product design for its EMC and make test plan for its compliance to international standard. In case of non-Compliance, Offer EMC design assistance. Timeline: Continuous activity	

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		Strengthening institutional infrastructure to support ongoing programmes				Construction of Residential quarters for Scientists and utility building at Navi Mumbai Construction of Scientist Hostel building at SAMEER , Powai campus Construction of Utility building at SAMEER, Kharghar Campus And Site development.	Creation of supporting infrastructure for R&D	March, 2013 Civil works for Quarters- March, 2013	

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		To keep pace with rapidly changing technology by continuous training of its manpower				Deputation of staff in India/Abroad to attend workshop, conference and seminars. To invite experts to deliver talks/seminars at SAMEER Centres.	Interaction with national and international experts and exchange of ideas	Timeline: Continuous activity.	

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2.	Micro-electronics and Nano-technology Development Programme	To establish nanoelectronics & micro-electronics 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, and MEMS.	-	100.00	-	2 nanoelectronics projects will be initiated	It would enable creation of a strong R&D base in nanoelectronics in the country	One by December 2012 and one by February 2013	
						2 microelectronics projects will be initiated.	It would enable creation of a strong R&D base in microelectronics in the country.	One by November 2012 and one by February 2013	

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3.	Technology Development Council Projects (Incl. ITRA)	IT for Industrial Applications	-	79.00	-	National Mission on Power Electronics Technology Phase II (NaMPET II) <ul style="list-style-type: none"> Initiation of two exploratory projects 	Enhancement of R&D infrastructure and design capability in the area of Power Electronics Technology contributing to design-led Electronics Hardware manufacturing.	April, 2012	NaMPET-II has been initiated on 2.1.2012 with outlay of ₹ 49.89 crores for 60 months duration.
		To strengthen local base for R&D/ application in Electronics and IT in the field of Industrial Electronics, Agriculture and Water Resources.				<ul style="list-style-type: none"> Initiation of two technology development/demonstration projects 		July, 2012	
						<ul style="list-style-type: none"> Holding of 3 Short-term Courses 		Sept, 2012 Nov., 2012 Jan., 2013	
						First National Workshop Academic Meet		Oct.2012	

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						<p>Application of Electronics for Agriculture & Environment (e-AGRIEN)</p> <ul style="list-style-type: none"> Completion of development and field trials of two technologies developed 	Enhancement of R&D infrastructure, design capability and demonstration on application of electronics for agriculture and environment.	Sept. 2012	Project was initiated on 18-3-2010 with outlay of ₹14.70 crore. for 48 months duration.
					<ul style="list-style-type: none"> Organisation of International Conference on Sensing Technologies 	Dec., 2012			

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						<p>Automation System Technology Centre (ASTeC)</p> <ul style="list-style-type: none"> Completion of remaining development work including two demonstration projects at industrial sites and take TOT related activities for the developed technologies in ASTeC Project 	Demonstration and availability of cost effective solutions of Automation Technologies to Indian user and manufacturing industries	Sept., 2012	ASTeC Project was initiated on 30.3.2007 with outlay of ₹ 24.92 crore for 60 months project duration. Although major technology development work is nearing completion but 6 months more time would be required to complete the field trials of demo projects to demonstrate the deliverables.

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						Intelligent Transportation System (ITS) <ul style="list-style-type: none"> Conduct second National Workshop on ITS 	Demonstration and availability of cost effective IT solutions for the road transportation sector	July, 2012	ITS Project was initiated on 18.9.2009 with outlay of ₹ 14.74 crores for 36 months period.
					<ul style="list-style-type: none"> Completion of field trials of Wireless Traffic Control System, Intelligent Parking Lot Management System and Red light Violation System 	Sept., 2012			
						<ul style="list-style-type: none"> To completion the development work and field testing/ demonstration of remaining four technologies and progress TOT related activities 		March, 2013	

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		<p>Information Technology in Emerging Areas</p> <p>To promote research & foster development in the Emerging areas of IT such as Ubiquitous computing</p>				<p>Projects on Application Development and research involving Ubiquitous Computing will be taken up in two areas:</p> <ul style="list-style-type: none"> • Agriculture & healthcare • Collaborative research in the field of Smart Grid, Intelligent Home & Rural healthcare <p>Research publications, patents, technology demonstration are the outputs</p>	Enhancement of research and application development in the area of Ubiquitous Computing.	March, 2014	
		<p>- FOSS</p> <p>-Bioinformatics</p> <p>-Perception Engg. Etc.</p> <p>-</p>				<p>Free & Open Source Software (FOSS):</p> <ul style="list-style-type: none"> • Initiate development of Component based OS • Training, GCC compiler improvements and applications on Android platform • Introduction of BOSS in CBSE schools for training and courseware development in Maths, Science and Social Science. 	Proliferation of Free & Open Source Software (FOSS), application development and contributing to growth of FOSS	March 2014	

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						Open Source based Simulator development to study, explore and develop multicore processors.	Contribute to better understanding of multicore processor architecture.	March, 2014	
						Three Centres of Excellence established to provide Human Resource Development in Bioinformatics and promote research in drug discovery applications..	Provide ICT support to develop software tools, algorithms databases with applications in Bioinformatics.	Sep., 2012	
						A software tool would be developed for complete genome analysis with applications in drug discovery for diseases like tuberculosis		Oct., 2012	
						5 Agri Bioinformatics Centres established would build up and host databases for usage by crop scientist/ Agri bio-infotmaticians		December 2013	

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						<p>Development of Algorithms & high end computational tools including databases for analyzing genomes and proteomes.</p> <p>All software tools, databases, algorithms developed in above initiatives would be hosted as open source for free access by scientific community and also would be published in national and international research journals.</p>		April 2014	
						<p>Application development in Perception Engg. in following areas</p> <ul style="list-style-type: none"> - Security applications - Assisted/enhanced living - Tele presence for distance education 	<p>Understanding functions related to human perception and its applications leading to algorithm development for usage in computer Science.</p>	April 2016	
						<p>Finite Element Model for Human model to be developed for use in Impact, Textile and Medical Applications.</p>	<p>Development of Computer based Human Body Model in the Indian context..</p>	April 2014	

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						Prototype Development of a very low power consumable device to monitor transportation and storage of sensitive items like Blood bag and medicines.	Technology Development for societal needs.	March, 2013	
		<p>High Performance Computing</p> <p>Promote R&D in High Performance Computing, Cloud Computing, Mobile Computing, Green Computing and Digital Preservation Technologies and their Applications</p>				<p>High fidelity computational design of engineering systems on HPC platforms.</p> <ul style="list-style-type: none"> • Computation of Multi-Phase Flows and Aero acoustics. • Real-Time Sign Language Computational Algorithms. • Nonconforming Spectral Element Methods for Elliptic Interface Problems. • Computational Analysis of Neutrophil Chemotaxis in Response to Multiple Cues. • Hybrid CPU/GPU-CUDA Parallel Algorithms for Algebraic Problems 	Enhanced R&D capabilities in High Performance Computing, Green Computing and Digital Preservation.	March, 2015	

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						Centre of Excellence for Digital Preservation (ongoing). <ul style="list-style-type: none"> Standards for Digital preservation. Preservation of E-district data, E-courts data, Government records and Cultural Heritage records. 		March, 2014	
						ICT for smart buildings with low carbon emissions (ongoing) <ul style="list-style-type: none"> ZigBee enabled Devices for energy measurement and flow monitors. ZigBee enabled Temperature, Humidity and Air quality interfaces. ZigBee enabled Controllers and Routers. ZigBee enabled building automation network. 		March, 2013	

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		Promotion of Innovation & Intellectual Property Rights (IPR)				The ongoing Technology Incubation & Development of the Entrepreneur (TIDE) scheme would support 27 institutes of higher learning for incubation of 80 technology start-up companies.	Promotion of innovation in ICTE by supporting incubation activities and nurturing of entrepreneurs.	March, 2014	
						Multiplier Grant scheme (MGS) for fostering collaborative research between academia & Industries would be continued. The activities in this regard are as below: - Seeking proposals - Appraisal of projects - Development of a MGS Portal - Implementing the approved proposals	Promotion of collaborative research between academic,/R&D institution and industry.	March, 2013	
						IPR facilitation support to DIT Societies and Grantee Institutions through filing of 125 IPRs Implementing SIP-EIT Scheme to provide support to SMEs for filing International Patent -5 cases to be processed	Fostering IPR ecosystem in ICT sector by way of providing facilitation services, awareness creation and development of requisite tools and databases.	March, 2013 March, 2013	

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						Creating IPR awareness in E&IT sector through <ul style="list-style-type: none"> • 20 IPR clinics/ Seminars • Customization of WIPO's Multimedia tool "IP Panorama" for Indian SMEs. • Development of Multimedia course for IP teaching 		March,2013 March,2013 March,2013	
						Initiation of New projects for augmenting IPR infrastructure through ICT technologies such as IP exchange of IPRs, Establishment of Prior Art Search Centers & Development of Digital Rights management tools		March, 2013	

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		Setting up of Bio-IT research and training facility IPR and entrepreneurship development.				Research and training facility, IPR (0-5) and entrepreneurship development (5-10), Trained manpower (100) development.	Availability of advanced bio-informaticians for clinical genomics research and applications, emerging job opportunities.	This is a 5 year duration project initiated in March 2010.	

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4.	Convergence, Communication and Strategic Electronics	To undertake and support R&D projects for the development of Convergence, Communication and Broadband Technologies	-	25.00	-	Initiation of 18-20 projects in development/application of the Next Generation Communication, SDR & Cognitive Radio, TETRA, Mobile Ad-hoc networks, Wireless Sensor Networks Systems, Cyber Physical systems, Broadband Technologies, IP based technologies, Green and digital broadcast technologies. ICT for strategic & surveillance applications. Studies in cutting edge technologies and development of road map for the country. Monitoring of about 25 ongoing projects by the respective Project Review and Steering Groups.	The R&D will lead to establishing indigenous capability in emerging technologies.	On an average 5 projects in quarter are proposed to be initiated. The projects are generally of 1-3 years duration.	

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5.	Component & Material Development Programme	<ul style="list-style-type: none"> To support infrastructure development and R&D and technology development projects for the development of Electronic Materials at C-MET 	0.60	25.00	15.50	<ul style="list-style-type: none"> To initiate new projects on solar cells including hybrid, based on CBD technique, & organic & nano composites based photovoltaic and also on the areas of nano oxide based aromatic gas sensors, sustainability of RoHS testing lab, electromagnetic interference shielding polymer, optoelectronic micro-photoconductor devices 	<ul style="list-style-type: none"> To develop suitable alternative materials for green energy source To sustain the RoHS Testing Lab To develop materials for EMI shielding, optoelectronic micro-photoconductor devices 	April, 2012	

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		<ul style="list-style-type: none"> To support development and initiatives to eradicate the issues related to electronics products affecting the environment 				<ul style="list-style-type: none"> To successfully complete the on-going projects on broadband EMI shielding, carbon aerocapacitor, hybrid solar cells, environmentally sound methods for recovery of metals from PCB, piezoelectric multilayer actuator micro valve, pilot production of Nano-PZT compositions & piezoceramic components, polymer based chemical sensor, flexible thin film transistors, <i>value added products from WEEE plastic</i>, prototypes aprons, glass sheets and curtains from lead free x-ray absorbing materials 	<ul style="list-style-type: none"> To develop the aerogel capacitor To develop Piezoelectric Multilayer Actuator for MEMS based Micro valve To develop Broadband EMI shielding materials using Magneto-dielectric Nanoparticles To develop alternative source of energy To explore the environmental friendly recycling technology for Printed circuit boards To develop technology for WEEE plastics To develop flexible transistor To develop lead free x-ray absorbing apron. 	March, 2013	

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		<ul style="list-style-type: none"> To nurture photonic technologies relevant in IT and optical communication as well as develop technologies in the broader application areas of Photonics through sponsored R & D projects. 				<ul style="list-style-type: none"> Consolidation of work carried out in the Biophotonics area. 	Multi-institutional Work in biophotonics for Health care	June, 2012	
						<ul style="list-style-type: none"> Optical fiber based Strain and Temperature sensing. 	Dev of technology for measuring distributed strain and temperature.	Sept. 2012	
						<ul style="list-style-type: none"> Solid State Lighting area – Blue OLED development work. 	Technology Development for Blue OLED	Dec. 2012	
						<ul style="list-style-type: none"> Innovative light extraction technology initial analysis. 	Improvement in efficiency of Solid State Lighting (OLEDs)	March, 2013	
						<ul style="list-style-type: none"> UV LED using MBE design work. 	Development of material for solid state lighting (LEDs)	March, 2013	
						<ul style="list-style-type: none"> Manpower Development based on Photonic Research Fellowship 	Developing of a resource base of personnel trained to carry out advanced research in Photonics	Sept. 2012	
						<ul style="list-style-type: none"> Further work in Photonics including on Manpower development 	To initiate new projects	March, 2013	

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		<ul style="list-style-type: none"> To support R & D projects for the development of Electronic Materials 				<p>To continue the core programme in the following areas:</p> <ul style="list-style-type: none"> Integrated Electronics & 3D Nano-scale Packaging Nano scale Materials and Composites for Myriad Applications Ultra High Purity Materials (Metals, Alloys & Refractory Materials) and Compound Semiconductors Materials for Renewable Energy Actuators and Sensors 	<ul style="list-style-type: none"> Process for Integrated Glass-Ceramic Packaging Generation of Nano-powders, Nanocomposite & Quantum dots of metals/semiconductors/ for Electronics Technology and allied applications Process technology /Pilot plant scale production of ultrapure metals Process for renewable energy material Process/technology for sensors and actuators 	March, 2013	

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6.	Centre for Development of Advanced Computing (C-DAC)	High Performance Computing (HPC) and Collaborative Computing	3.00	203.40	230.00	<ul style="list-style-type: none"> Preparation for Petascale Computing 	<ul style="list-style-type: none"> R&D towards Architecture of Petascale Computing Advance research in domains of Science and Engineering with the use of PARAM systems as follows: 	<p>March 2014</p> <p>March 2014</p>	
						<ul style="list-style-type: none"> HPC Applications 	<ul style="list-style-type: none"> Atmospheric and Environmental Science Material and Structural Engineering Computational Fluid Dynamics Geophysical Bio-informatics 	<p>Continuing</p>	

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						<ul style="list-style-type: none"> Power Optimization solutions for High Performance Computing. 	Customized SMPS an Active filter; Wireless monitoring and display of power supplied to the nodes of HPC system	March 2014	
		Garuda				<ul style="list-style-type: none"> Framework for Garuda Cloud Integration 	<ul style="list-style-type: none"> Development of Grid-Cloud integration components 	September 2012	
		Multilingual Computing				<ul style="list-style-type: none"> Speech to Speech Machine Translation System 	<ul style="list-style-type: none"> Development of Speech to Speech translation system among English and Indian languages for Education Domain 	March 2016	

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						<ul style="list-style-type: none"> Machine Translation System (Indian to Indian Language for Administrative domain) 	<ul style="list-style-type: none"> Development of Machine Translation System from Regional Language to Hindi for administrative domain for state Government domain 	March, 2013	
						<ul style="list-style-type: none"> Optical Character Recognition (OCR) 	<ul style="list-style-type: none"> Development and deployment of new emerging tools and capabilities 	March, 2013	
						<ul style="list-style-type: none"> Internationalized Domain Names (IDN) 	<ul style="list-style-type: none"> Localization of domain names in Indian languages 	December, 2013	

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		Professional Electronics				<ul style="list-style-type: none"> • Mobile Ad hoc Network (MANET) & Advanced Network Monitoring 	<ul style="list-style-type: none"> • Development of technologies and solutions for advanced radio and network communications to address the military and civilian communications 	November 2012	
						<ul style="list-style-type: none"> • Software Defined Radio (SDR) – Manteck Radio 	<ul style="list-style-type: none"> • Development of lab proto- model for SDR Manteck Radio 	June, 2012	
						<ul style="list-style-type: none"> • Electronics for Agriculture and Environment 	<ul style="list-style-type: none"> • Sensor and Sensing Systems for Health monitoring Plants and other living species 	March, 2014	

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Sr. No	Name of Scheme/ Programme	Objective/ Outcome	Outlay 2012-13 (₹ in crore)			Quantifiable Deliverables/Physical Outputs	Projected Outcomes	Processes/ Timelines	Remarks/ Risk Factors
			Non-Plan	Plan Budget	Comp IEBR				
						<ul style="list-style-type: none"> Intelligent Transportation System 	<ul style="list-style-type: none"> Wireless traffic control system, traffic management and red light violation; Intelligent parking lot management 	September, 2012	
		ICT for Social Development				<ul style="list-style-type: none"> Cloud Computing Infrastructure development and FOSS applications 	<ul style="list-style-type: none"> Development of Cloud Computing Framework including the middleware, security solution leading to cloud computing environment to be used as a test-bed for deployment of scientific applications 	March, 2014	

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						<ul style="list-style-type: none"> NRCFOSS- Phase II including desktop for the differently abled 	Development of Open Source Tools, Technologies and localized applications for enhancing the accessibility to IT for differently abled people.	May, 2012	
						<ul style="list-style-type: none"> Architecture Development for Electronic Health Records (I) 	Development of Medical Kiosk with body sensor Network Health Portal for Doctors / Patients.	December, 2012	
						<ul style="list-style-type: none"> Healthcare Delivery using SaaS model in Cloud Computing 	Development of SaaS deployable HGIS Software Suite	December, 2012	
						<ul style="list-style-type: none"> Mobile Computing 	<ul style="list-style-type: none"> Development of applications, tools and middleware, for service delivery gateway through mobile computing to reach masses 	March, 2014	

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		Trust, Protection, Security and Detection Technologies				<ul style="list-style-type: none"> • Biometric, Finger Print, Iris and Face Recognition 	<ul style="list-style-type: none"> • Biometric solutions with high performance matching algorithm 	December, 2012	
						<ul style="list-style-type: none"> • Preventive Security Systems such as PAX-Insider Attack Detection for preventing data infiltration 	<ul style="list-style-type: none"> • Development of Prototype System to Detect Insider Attack 	March, 2013	
						<ul style="list-style-type: none"> • Development of Security Solutions for SCADA Systems 	<ul style="list-style-type: none"> • SCADA Security solutions developed and pilot tested in Power GRID in southern region 	March, 2013	

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		Ubiquitous Computing				<ul style="list-style-type: none"> • Wireless Sensing Network <p>Perception Engineering for Medical, Agricultural, Environmental and Social Applications</p>	<ul style="list-style-type: none"> • Body Area Networks and application in healthcare; Wireless sensor network platform and applications • Perception inspired algorithms in the area of Image Processing and Pattern Recognition. 	<p>March ,2014</p> <p>March ,2014</p>	
		Education Technology				<ul style="list-style-type: none"> • Development of next generation e-learning and m-learning tools and technologies 	<ul style="list-style-type: none"> • Adaptive instruction delivery framework • Automated program grading systems. 	<p>December, 2012</p> <p>February, 2013</p>	

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7.	Electronics in Health & Tele-medicine	To promote development of medical electronic equipment, rehabilitation devices and Telemedicine Systems	-	11.50	-	Establishment of batch fabrication facility for Linear Accelerator (LINAC) machines at SAMEER, Mumbai.	Facility for production of LINAC machines.	December, 2012	Certification / Approval from the Atomic Energy Regulatory Board (AERB)/local State authorities would be required.
						TOT of indigenously developed medical electronics products.	Commercialisation of LINAC technology	December, 2012	TOT agreements with industries who have expressed interest to be signed as per mutually agreed terms.
						Deployment of four Linear Accelerator machines for cancer treatment.	Creation of facility for cancer treatment at four hospitals.	March, 2013	Commissioning of the LINAC machine is linked with

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									site preparation at hospitals and approval by AERB.
						Initiation of new R&D projects in the area of Medical electronics & Telemedicine.	Launching of new projects in identified thrust areas	March, 2013	--

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8.	Technology Development for Indian Languages	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	-	<u>New Projects</u>			
						Development of Indian Language to English Machine Translation System	Alpha version of this Technology at the end of project may be useful for judicial domain.	Dec., 2012	
						Development of Voice interface using speech recognition in Indian Languages for Railways/ Geospatial information	Development of Alpha version Automatic Speech Recognition in Indian Languages and its probable Mobile applications.	Jan., 2013	
						Development of Tree bank structures for Indian Languages	Enhancing the efficacy of parsers which will aid the improvisation of MT performance	Sep, 2012	
						Digital Archival facility for TDIL Project Outcomes	Preservation of the developed source code for various Indian Language Technologies at central repository for future research and technology evangelization.	April, 2012	

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						Development of Shallow parsing tool in Indian Languages	These tools will enhance NLP research in country	April, 2012	
						Research, Development, promotion and proliferation of Localization in official languages and Localization Tool showcasing Laboratory etc.	Availability of Localization tools and technologies to develop e-content applications, research manpower in Indian Languages	March, 2013	
						Development of Voice interface using speech recognition in Indian Languages for Railways/ Geospatial information	ASR engines in Indian Languages for Mobile and Geospatial information	Jan., 2013	
						Mobile Web Initiative in Indian Languages	Development of Mobile Web Standards and Mobile Ok in Indian Languages	Jan., 2013	
						Sanskrit –Hindi MT System Consortium–Phase -II	Ancient Sanskrit knowledge will become accessible in Hindi	Dec., 2012	
						Development of Pronunciation Lexicon for 5 Indian Languages based on	PLS of 3.00 lakh words for 5 Indian	April, 2012	

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						Phonemic and Phonetic Study.	Languages		
						<p><u>On-Going Projects</u></p> <p>Six Consortium Mode projects –Phase –II in the areas of English-Indian languages Machine Translation , Indian Languages – Indian Languages Machine Translation , OCR , OHWR and Cross-lingual Information Access (CLIA)</p>	On-line availability of MT systems of Phase-I for few language pairs is aiding users to translate simple sentences. User Trial installation of Hindi OCR. Indian Language search would be made available.	August, 2012	phase –II consortia projects are being implemented having the objective of ‘Lab to Land Technology deployment’
						Stake holders consultation and Validation of the following : Consolidation of inputs for internalization in W3C standards namely CSS, PLS.	Web Internationalization , Standardization and W3C India Initiative	Feb., 2013	

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						Uploading of Language Technology Software Tools & resources	Indian Language Technology Proliferation and Deployment Centre	March, 2013	TDIL Resources and Tools are continuously being uploaded.
						Support for CD user base Percolation of CDs to new spheres. Reviewing of CD Contents & also upgrading of open source regions. Development of Indian Languages fonts for Mobile handsets	Enhancement of users' skill for use of IT in Indian Languages.	March, 2013	
						Development of Text-to Speech Systems Indian Languages integrated with Screen reader and Mobile Environment	The visually challenged people will be able to use ICT applications in 12 Indian Languages	Feb., 2013	
						Alpha version of Speech Recognition Systems in 5 Indian Languages for Agricultural domain	Deployment of the speech interface on NIC Agmarknet applications	Feb., 2013	
						Alpha version of NLP Dashboard	This tool will aid researches in testing of NLP software during development phase	Sept, 2012	

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						Alpha version of Prosodically guided Phonetic Engine and Phonetic search engine in Indian Languages	Voice based Search engines in Indian Languages.	March, 2013	

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9.	IT for Masses	Initiate / promote activities in ICT for focus groups and areas for inclusive growth of IT Sector.	-	16.94	-	<p>To conceive and formulate projects for specific target groups for e-inclusion i.e. SC, ST, minorities, gender, differently-abled, senior citizens and BPL households.</p> <p>Capacity building of SC, ST, minorities, gender, differently-abled, senior citizens and BPL households through Infrastructure development, Training and Entrepreneurial creation of target groups in different States/UTs.</p>	e-Inclusion of disadvantaged groups and Development of backward areas using IT.	Initiate 9 New projects by March, 2013	

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10.	Media Lab Asia	To undertake and facilitate Research, Development and deployment activities	-	11.30	3.00	<ul style="list-style-type: none"> 4 projects will be introduced in the following areas: ICT – Empowerment of Differently abled ICT – Healthcare ICT – Livelihood enhancement ICT – Education 	Development and Deployment of ICT based models in thrust areas of Media Lab Asia viz. Livelihood enhancement, Empowerment of the Differently abled, Healthcare and education	2 projects will be introduced during April – Sept 2012 2 projects will be introduced during Oct 2012 – Mar 2013.	
						<ul style="list-style-type: none"> 5 projects will be completed 		The projects will be completed as per schedule.	

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11.	Standardisation, Testing and Quality Certification (STQC)	Establishment of Quality Assurance Infrastructure in the country to facilitate quality products & services at par with global standards and practices	7.00	120.00	-	1. Up gradation of Test & Calibration facilities to cater to state-of-the-art products with emerging technologies	Up gradation of test and calibration facility to meet the demand of the industry.	March, 2013	
						2 Revenue target realization.	Revenue of ₹ 45 crore approx. likely to be generated.	March, 2013	
						3. Upgrade s/w test facilities for e-Governance application	S/w Test Tools for “Mission critical Project” like defense/space will be procured.	March, 2013	
						4. To up-grade Biometric device Certification Scheme	Bio-Metric devices to be certified.	March, 2013	
						5. Upgrade testing and Auditing facilities for security of Network, systems, applications and websites	Tools and skills to be upgraded for better services.	March, 2013	
						6. Progress of construction activity of STQC Building at Noida.	Construction activity of first phase to be completed.	March, 2013	

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						7. Human Resource Development by conducting DOEACC 'O' & 'A' level courses in NE region.	SC/ST/OBC/women / weaker section of society and unemployed youth of NE region will be benefited in Computer field.	March, 2013	

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12.	Software Technology Parks of India and EHTP	To promote exports of electronics & IT	-	2.50	192.13	To set up 2 new STPI Centres	Increased exports of IT-IT enabled Services.	On continuous basis	STPI is having 52 centres across the country and more than 10,000 companies are registered with STPI.

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13.	Electronic Governance (e-Governance)	The National e-Governance Plan (NeGP) is an ambitious initiative to provide both horizontal and vertical connectivity to transform the socio-economic landscape of rural India and simultaneously bring significant improvement in the delivery of public services by enhancing efficiency, transparency and reliability in government services. Some of the key challenges in implementation of such a complex Programme Programme includes low	-	975.00	-	<p><u>Establishment of SWAN</u></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>SWANs have been made operational in 29 States/UTs.</p> <p>Implementation of remaining States / UTs SWANs (Rajasthan, Jammu & Kashmir, Dadar & Nagar Haveli, Daman & Diu, Andaman & Nicobar Islands), which are at various stages of Implementation. Goa has opted out from the SWAN Scheme as the State has set up Network on their cost.</p>	<p>Implementation of SWAN in remaining States/ UTs</p> <p>Connecting SWANs with NKN</p> <p>Establishing benchmarks and operationalising online monitoring of number of departments connected to SWAN, uptime and utilization of bandwidth</p>	<p>Implementation of SWAN March 2013.</p> <p>Connecting all operational SWANs to NKN by March 2013</p> <p>Establishment of benchmarks by May 2012.</p> <p>Online monitoring tool by July 2012</p>	<p>Obsolescence of existing equipment and need for upgradation</p> <p>Procedural delays in tendering and procurement at State / UT level</p> <p>Complexity involved in leveraging NKN and NoFN</p> <p>Availability of vendors in some of the States / UTs</p>

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		levels of ICT literacy in rural India and therefore the importance of assisted access becomes even more relevant. In light of this, besides on-going programmes the declaration by the Hon'ble President to extend the existing CSC Scheme to cover all Panchayats by setting up additional 150,000 CSC will have far reaching consequences because it mark a paradigm shift in accessibility to public services.							

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						<p>State Data Centres</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.</p> <p>The implementation of 7 SDCs in the States / UTs will be completed in 2012-13.</p> <p>5 data centers will be cloud enabled and DR (Disaster Recovery) facility will be made operational in at least 13 data centers</p>	<p>Establishing benchmarks and operationalising online monitoring system covering:</p> <p>a. Number of departments migrated to SDCs</p> <p>b. Utilisation of SDC capacity</p> <p>c. Cloud based services</p>	<p>Additional 7 SDCs expected to be made operational by March 2013.</p> <p>Establishment of benchmarks by May 2012</p> <p>Online monitoring tool by July 2012</p>	<ul style="list-style-type: none"> • Delay in identifying , change in the site, construction of new building and handing over the site to the selected Bidder. • Delay in provisioning of raw power for the SDC. • Delay in awarding LoI and Contract to the selected Bidder. • Delay in the completion of the Final Acceptance Test.

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						<p>Common Services Centres (CSCs)</p> <p>The Government had earlier approved a Scheme for establishing 100,000+ CSCs, primarily in rural areas of the country. These Centres are envisaged to be broadband Internet enabled and are presently providing various available government and private services at the doorstep of the citizen. The Scheme is to be implemented in Public Private Partnership.</p> <p>Deliverables / Outputs:</p> <p>Operationalisation of CSC portal</p> <p>Registration of CSCs on online monitoring tool</p> <p>Implementation of financial inclusion services in 9,000 additional CSCs</p> <p>Broadband connectivity for 25,000 additional CSCs</p>	<p>Complete the process of establishment of 100,000+ CSCs in the rural areas of the country</p> <p>Establishing benchmarks and operationalising online monitoring of number of services delivered and the number of transactions</p> <p>Improving sustainability of CSCs by initiating financial services, improving broadband connectivity and adding government services</p>	<p>Establishment of 100,000+ CSCs by March 2013</p> <p>Establishing Benchmarks by June 2012</p> <p>Online monitoring of services and transactions by December 2012</p> <p>Financial services in 9,000 CSCs by March 2013</p> <p>Adding an average of 10 G2C services by March 2013</p> <p>Broadband for 85% CSCs by March 2013</p>	<p>Majority of the remaining CSCs to be rolled out fall under difficult, inaccessible / and or areas having law and order/naxalite problems.</p> <p>Termination of contracts of existing SCAs.</p> <p>The states are also being continually advised to create and facilitate more and more G2C services to benefit the rural population and thereby achieve objective of the scheme.</p>

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									Delays in Broadband Connectivity by BSNL and other telecom service providers
						<p>State Portal, SSDG, e-Forms -</p> <p>The scheme aims at 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.</p> <p>While the State Portal will provide the citizen interface for government information / forms and services, the SSDG will enable a range of service access providers (SAPs) like CSCs and mobile operators to provide easy access to all government services to the citizens.</p> <p>Output / deliverable:</p> <p>Operational State Portal / SSDG in 10 additional States / UTs</p>	<ul style="list-style-type: none"> Go-live in at least 10 States/UTs Online monitoring of services and transactions operational through State Portals / SSDGs 	All these actions will be completed by March 2013	Delay at the State/UT level in finalization of Contract, Agreement, and various deliverables of the project.
						<p>e-District</p> <p>e-District Mission Mode Project proposes integrated and seamless delivery of citizen services by district administration through</p>	Establishing benchmarks and operationalising online	March 2013	The e-District MMP is to

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						<p>automation of workflow, backend digitization, integration and process redesign across participating departments for providing services to the citizens. The project covers high volume of Citizen Centric Services at district and sub district level.</p> <p>Output / deliverables:</p> <p>Launch of e-district project in 90 additional districts</p>	<p>monitoring of number of services delivered and the number of transactions</p> <p>10 categories of services to become operational in 90 districts thereby improving citizen access to services and financial viability of CSCs</p>		<p>be implemented at the State Level. The State Governments will need to identify services to be delivered under the e-District MMP, under take BPR and computerization and thereafter delivery of these services to the citizens</p>
						<p><u>World Bank supported “India : e-Delivery of Public Services” Project</u></p> <p>The Government of India and World Bank signed an Agreement of US \$150 million for “e-Delivery of Public Services Development Policy Loan”, under NeGP.</p> <p>The “India: e-Delivery of Public Services Development Policy Loan” will support NeGP’s countrywide plans of increasing online services for citizens in their locality,</p>	<p>Improved access to online services to citizens in their locality by policy and institutional actions emphasising coordination and increase outreach to citizens, improved capacity at Central and</p>	<p>GoI proposes to use this DPL support as a focal point to convene the associated departments and levels of government</p>	<p>Identification of suitable projects not covered by existing MMPs</p> <p>Delays in execution of identified</p>

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						to improve the quality of basic governance in areas of concern to the common man	State government level to roll out services to citizens.	around a concrete reform agenda with end-of-series outcomes slated for fruition by 2013 – 2014	projects Delays in approvals by competent authorities
						<p>Capacity Building Scheme</p> <p>The scheme is mainly for providing technical & professional support to State level policy & decision-making bodies and to develop specialized skills for e-governance.</p> <p>Formulation of a Human Resource (HR) Policy for e-governance</p> <p>Institutional Capacity Building for all the State/UTs.</p> <p>Recruitment of SeMT for all States/UTs</p> <p>Orientation of Political and Policy level personnel's (Leadership Meet)</p> <p>Specialized training to project level officials of all States/UTs</p> <p>Other activities like CIO training etc.</p>	<p>Formulation of HR Policy</p> <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 & SeMT</p> <p>Training to States/Central level officials to create e-Champions and Chief Information Officers (CIOs)</p>	<p>March 2013</p> <p>Continuous activity</p> <p>Continuous activity</p> <p>Continuous activity</p> <p>Continuous activity</p> <p>Continuous activity</p>	<ul style="list-style-type: none"> • Approval of HR Policy by competent authority • Delays in recruitment • Recruitment & Training Programmes require active participation from the States/UTs. • Identification and availability of trainees

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									from the State/UT for training.
						<p>Standards for e-Governance</p> <ul style="list-style-type: none"> • Development and enhancement of Standards, Guideline, Policy in identified areas • Development of standards in the new areas like Digital Preservation • Release of standards/ guidelines in Interoperability framework, Data & Metadata phase II, Security, Enterprise Architecture, Quality & other new areas that emerge 	Interoperability, integration & seamless data sharing of e-Gov applications	Continuous activity	<p>Minimal response / feedback on the standards</p> <p>No full time participation of the experts.</p>

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						<p><u>National e-Governance Service Delivery Gateway (NSDG)</u></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..</p> <p>Outputs / deliverables:</p> <p>Common layer for access to</p> <ol style="list-style-type: none"> services provided by various ministries and departments common services such as payment gateway / mobile service delivery gateway / language services / document depositories / authentication services 	<p>Integration, interoperability & data sharing amongst various eGov applications.</p> <p>Establishing benchmarks and operationalising online monitoring of number of services delivered and the number of transactions</p>	March 2013	Readiness of the departments for the interoperability and data sharing

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						<p><u>Framework for Mobile Governance</u></p> <p>Objectives:</p> <ul style="list-style-type: none"> Utilize the massive reach of mobile phones and harness the potential of mobile applications to enable easy and round-the-clock access to public services, especially in the rural areas. Create unique infrastructure as well as application development ecosystem for m-Governance in the country. <p>Deliverables:</p> <ul style="list-style-type: none"> Promote utilization of Mobile Service Delivery Gateway (MSDG) to provide citizen centric public services over mobile devices (m-Governance services). To create an M-Governance Application Store to host applications for public services. 	<p>Availability of public services over mobile devices from 100 Central / State Departments</p> <p>Mobile governance App Store will create an application development ecosystem for delivery of public services over mobile devices</p>	<p>March 2013</p>	<p>Delays could occur in identification of mobile based public services by the central and state Government departments and agencies, in developing suitable applications for them, and in integrating them with the MSDG.</p>
						<p><u>Assessment</u></p> <p>Under the Assessment programme, the following types of assessment of e-Governance projects are proposed to be undertaken:</p>	<ul style="list-style-type: none"> Impact Assessment of 2 MMPs 	<p>March 2013</p>	<p>Revision of Assessment and Work Allocation</p>

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						<ul style="list-style-type: none"> • Impact Assessment • Detailed Assessment • Baseline Assessment • e-Readiness Assessment of States & UTs <p>The Assessments reports provide insights into the impact of the projects in terms of cost of accessing services, quality of services rendered and empowerment in terms of transparency, accountability etc. The assessments aid in gaining an empirical insight into issues relating to the dynamic and organic nature of governance such as how these projects are perceived by the citizen and their effect on him as an individual.</p> <p>The e-Readiness Assessment provides a comparative analysis of states and UTs on the various indicators of e-Readiness which impact the ability of the state as well as the business and the people residing in that state to participate in the knowledge economy.</p>	<ul style="list-style-type: none"> • Baseline Assessment of 2 projects including at least 1 MMP • Detailed Assessment of 3 projects including at least 1 MMP • Publication of E-Readiness Assessment 		process and re-empanelment of agencies

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						<p><u>Awareness & Communication</u></p> <p>National Awareness Campaign for NeGP</p> <ul style="list-style-type: none"> To create awareness among citizens about the initiative and its objectives – Output – Mass Media Campaign using TV, Radio & Print; Outreach in villages To build distinctive brand of NeGP to be utilized across Departmental communications – Output – Films, posters and advertisements that can be used by other departments To motivate other external stakeholders through Workshops and seminars at MMPs / State / Division level 	<p>Awareness at national level about NeGP</p> <p>Promotion of NeGP Umbrella brand amongst states and MMPs.</p> <p>Increased awareness at State and village level about NeGP</p>	<p>Continuous Activity</p>	<p>Approval of Campaign</p> <p>Readiness of States for Outreach activities</p> <p>Willingness of other MMPs to use NeGP Brand</p>
						<p><u>National e-Praman Framework on e-Authentication</u></p> <p>Objectives:</p> <ul style="list-style-type: none"> Establishment of a common National e-Pramaan Gateway to ensure electronic authentication of online and mobile users to facilitate access to and delivery of public services. Deployment of e-Authentication processes and mechanisms by all Government Departments and Agencies, as part of their service delivery strategy Electronic authentication of all 	<ul style="list-style-type: none"> Common National e-Pramaan Gateway Deployment of e-Authentication processes and mechanisms by 	<ul style="list-style-type: none"> Pilot for National e-Pramaan Gateway – Dec 2012 Develop- 	<p>Delay in identification of applications for e-Pramaan based</p>

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						<p>Government Web sites in order to build trust among the users.</p> <p>Deliverables:</p> <ul style="list-style-type: none"> • National e-Pramaan Framework on e-Authentication for Public Services • National e-Pramaan Gateway • Integration of e-Pramaan Gateway with UID's Authentication Platform • Integration of Gateway with NSDG, SSDG & MSDG 	Government Departments and Agencies	ment of National e-Pramaan Gateway – Mar 2013	authentication by central and state Government Departments and Agencies

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14.	Cyber Security (incl. CERT-In, IT Act)	<ul style="list-style-type: none"> • Security Policy, compliance & assurance 	-	45.20	-	<ul style="list-style-type: none"> • An enabling mechanism for achieving conformance with provisions of IT Act, statutes and other policy initiatives of the Government and regulatory bodies. Improvement in security posture of organisations and enhancement in the ability of IT systems and networks to resist cyber attacks. 	<ul style="list-style-type: none"> • Implementation of cyber security Crisis Management Plan (CMP) and security best practices in Central Govt. Ministries/Deptt. as well as States/UTs. • Verification of security posture, compliance and preparedness of Government and critical sector organizations. • Cyber Security conformity 	<ul style="list-style-type: none"> • Ongoing. • Status of compliance to be ascertained at periodic intervals. • Sectoral Crisis Management Plans to be developed and implemented • Periodic cyber security drills to be conducted to verify security posture and compliance. • Ongoing, Empanel- 	

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							Assessment Infrastructure (Product, Process & People) • Enhancement of IT product security testing facility and infrastructure.	ment activities to be conducted at periodic intervals. • Ongoing, Upgradation of existing test facility and enhancement of skills and capabilities	
		<ul style="list-style-type: none"> Security awareness, skill development and training 				<ul style="list-style-type: none"> Trained manpower to implement techniques to secure IT infrastructure. Trained manpower to collect, analyse and process digital evidence. 	<ul style="list-style-type: none"> Specific training facilities, training modules and content development Awareness and training programmes to facilitate information 	<ul style="list-style-type: none"> Ongoing Ongoing Training programmes on specific topics of 	

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						<ul style="list-style-type: none"> Pre trained manpower will help in securing cyber space and check cyber crimes. 	sharing to deal with crisis situations.	cyber security to be organised	
		<ul style="list-style-type: none"> Security R&D for indigenous skills & capabilities 				<ul style="list-style-type: none"> Development /enhancement of skills and expertise in areas of cyber security 	Research and development of indigenous cyber security solutions, proof of concepts and prototypes and skilled manpower in areas of cyber security including <ul style="list-style-type: none"> Crypto Analysis & Research Network & System Security - Mobile Monitoring & Forensics Vulnerability assessment and remediation 	<ul style="list-style-type: none"> Ongoing. Formulation of proposals with special focus on cryptanalysis, malware research, mobile security, cloud security, advanced cyber forensics & evaluation of proposals by Working	

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							through sponsored projects at recognized R&D organisations.	Group • Periodic review of individual projects	
		<ul style="list-style-type: none"> • Security incident – early warning and response (CERT-In) 				<ul style="list-style-type: none"> • Enhancing the security of communications and information infrastructure in the country 	<ul style="list-style-type: none"> • Rapid response, resolution and recovery • Security incident prediction, prevention and protection • Security assurance • Enhancement of security cooperation 	<ul style="list-style-type: none"> • Ongoing. • Upgradation of CERT-In facilities and capabilities for crisis management and emergency response. • Comprehensive threat assessment and attack mitigation by means of net traffic analysis 	

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								and deployment of honey pots. • Realtime Malware tracking and analysis with special focus on virus/bots. • Real time response to cyber security incidents • Alerts, Advisories and vulnerability Notes	

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		<ul style="list-style-type: none"> Enabling Legal framework for supporting E-Commerce and E-Governance activities 				<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> Legal Framework that can effectively support growth of E-Commerce and E-Governance in the country. Operation and maintenance of Cyber Appellate Tribunal 	<ul style="list-style-type: none"> Ongoing, Profiling the requirements for enhancing the provisions of the existing legal framework Ongoing Awareness programmes for adjudicating officers to be organized. <p>Disposal of Appeals relating to the Cyber Law.</p>	

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15.	Controller of Certifying Authorities (CCA)	To promote use of electronic/digital signatures for e-governance and e-commerce applications	-	6.00	-	Promotion of use of Electronic/Digital signature certificates	Enhanced use of electronic/digital signatures for e-governance and e-commerce, banking applications etc. Training facilities, modules and content development.	Continuing process	

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16.	Education and Research Network (ERNET)	To provide network infrastructure to connect Educational & Research Institutes to each other as well as to rest of the world.	-	0.01	84.00	Upgradation of Technology & Capacity of ERNET Network & Extension to South Asian countries through TEIN3.	To provide better internet access to ERNET users by enhancing the technology and capacity of ERNET network. Facilitate collaboration with other research networks through TEIN3.	March, 2014	
		To carry out research in Collaboration with partner institutions at national and international level.				Work on Mobile IPv6, 6LoWPAN and new R&D Initiatives. Continuation of R&D initiatives with EU through EU-India Grid2, My Fire and other projects.	Interoperability of Grids, IPv6 deployment, future internet research & experimentation.	March, 2012	
		To implement turnkey ICT projects for targeted user domains.				1. E-linkage of 200 KVKs/ZPDs of ICAR	To facilitate access and dissemination of information on agriculture to the farming community of the country	February, 2017	
						2. Connecting schools under the project NVS and KVS.	To strengthen computer education in the schools.	Ongoing	

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						3. Setting up of centralized secure Data Centre and intranet of 274 ICAR institutes (A world bank funded project of ICAR).	A dedicated centralized Data centre for ICAR & its institutes for dissemination of agriculture related information.	Ongoing	
						4. Continuation of Digital Library Initiatives.	To provide access to digital libraries through internet to the targeted user group.	August, 2012	
						5. Establishment of ICT Centres in 250 Schools in Rajasthan	To deliver state-of-art ICT infrastructure and e-learning resources in schools to extend the learning opportunities provided by internet to rural school children.	November, 2013	
						6. Establish 100 ICT vocational centres for skill creation for the disabled children	To enhance the computer skills of children with disabilities.	March, 2013	

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17.	Promotion of Electronics / IT Hardware Manufacturing	Promotion of Electronics Hardware Manufacturing in the country.	-	5.00	-	(a) Further action for setting up of Semiconductor Wafer Fabs for manufacture of Chips in India based upon the recommendations of Empowered Committee and Government approvals.	(a) to (h) of Quantifiable Deliverables: These would encourage investment in Electronics/ IT hardware manufacturing sector, leading to growth of production of Electronics hardware industry from 11.2% (estimated for 2011-12) to 14% in 2012-13.	March, 2013	(a) An Empowered Committee (EC) has already been constituted with the approval of Cabinet to make recommendations in this regard. The Expression of Interest (EoI) has been invited and EC is evaluating the responses. This will depend upon the business plan of the applicants and the kind of support required from the Govt. After considering the

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									proposals, the EC would make recommendations.
						(b) To take action for obtaining approval for introduction of Modified Special Incentive Package Scheme to bridge the disability cost in manufacturing of electronics hardware in the country.		March, 2013	(b) & (c) The draft Cabinet notes have been circulated for inter-ministerial consultations. The finalization of draft Cabinet Note would depend upon the outcome of consultation process.

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						(c) To take action for obtaining approval regarding setting up of Electronics Manufacturing Clusters to promote ecosystem for promotion of manufacturing of electronics hardware in the country.	At least two clusters would be initiated.	March, 2013	
						(d) To obtain in-principle approval of Planning Commission on the Detailed Project Report prepared for setting up of a dedicated “Electronics Development Fund” for promotion of Innovation, R&D, Indian IPR and development of Indian Microprocessor and thereafter obtaining approval of EFC.		March, 2013	(d)The implementation of the proposal would depend upon the appraisal and approvals of the concerned Govt. Departments
						(e) Developing and mandating Standards for Electronics Goods and Setting up of a Programme Management Unit (PMU) for supporting the same.		March, 2013	(e) Approval for setting up of PMU to support the initiatives for developing and

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									mandating Standards in Electronics has been received and notification of mandatory scheme in consultation with BIS is under process. The action depends upon the notification of mandatory scheme after requisite approvals from Govt. and recruitment of specialized

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									manpower.
						(f) Implementation of Communications and Brand Building (C&BB) Campaign for the promotion of Electronics System Design and Manufacturing (ESDM) industry of India: As a part of this project, the Electronics e-Newsletter would continue to disseminate the information regarding ESDM; State level Workshops; specific verticals related workshops and outreach activities in academia pertaining to ESDM would be promoted. Further, activities envisaged in the Campaign would be implemented based upon the outcome of Communications Need Assessment study and requisite approvals.	At least three major investment proposals (FDI) would be attracted in ESDM sector.	March, 2013	(f) Communications and Brand Building Scheme has been approved in principle and Communications and Assessment Study is about to be commissioned. Based upon the outcome of the Study and requisite approvals, deliverables would be achieved.

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						(g) Finalization of Guidelines for implementation of the Policy for Preference to domestically manufactured electronic goods in procurement due to security considerations and in Government procurement.		March, 2013	(g) Finalization of draft Guidelines will depend upon outcome of consultations with industry and stakeholders and thereafter approval of Ministry of Finance.
						(h) Study for Assessment of Skill Gap and Capacity Building in ESDM Sector.		March, 2013	

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18.	National Institute of Electronics and Information Technology (NIELIT – erstwhile DOEACC)	<ul style="list-style-type: none"> To carry out HR Development in Information Electronics & Communication Technology (IECT). To produce quality professionals through Long Term & Short Term Courses in the Formal & Non-Formal Sector. 	1.70	10.75	1799.17	I. Training in NIELIT Centres (a) To conduct training in Formal Sector Long Term Courses (M.Tech, MCA, BCA, PGDCA, Diploma in EE & CS etc.) – 1,900 students. (b) To conduct training in Non-Formal Sector Long Term Courses (DOEACC O/A/B Level courses, Bioinformatics O/A Level courses, Hardware Courses at O/A Level – 15,250 students. (c) Training in Short Term courses of duration less than one year including ITeS/BPO – 14,700 students.	IECT Trained Professionals will be available for the industry for employment and will be contributing to the economy.	Annual Exams July 2012 & January 2013 Semester wise exams Batch-wise exams	

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						<p>II. National level Certification Scheme</p> <p>(a) To Accredit Training Institutes – 60 numbers</p> <p>(b) Registration of the Candidates - 57750 numbers</p> <p>(c) To conduct National level Examination – 1,10,000 modular candidates</p>	-do-	<p>On-going Process</p> <p>-do-</p> <p>July 2012 & January 2013 Annual/ Semester wise exams</p>	
						<p>III. IT Literacy Programme</p> <p>(a) To conduct National level Examination in Course on Computer Concepts (CCC)- 1,00,000 candidates.</p> <p>(b) To conduct National level Examination in Basic Computer Concepts (BCC) – 20,000 candidates.</p>	-do-	<p>4 monthly exams and on every 1st & 3rd Saturday of a month on demand basis.</p>	

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19.	Manpower Development (including Skill Development in IT)	E-learning	-	127.69	-	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).	This would lead towards the expertise building for development of tools for nurturing personalized learning.	June, 2012	
						Video Compression and Decompression for E-Learning - 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.	The technology developed would be used by Brihaspati, and open source Learning Management System (LMS) developed by IIT Kanpur. Brihaspati is a content management and delivery system being used by 85 academic institutions. These institutions would be able to use e-learning more effectively.	April, 2012	

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						Adaptable e-Learning Accessibility Model for the Disabled - to carry out R&D in the area of providing a solution for accessibility for the disabled in the domain of E-Learning that would result in development of tools and products in the area of accessibility from the emerging and promising technologies.	This open source software tool would be useful to children with autistic and mild mental disorder besides parents, teachers and therapists. The project outcome will happen after completion of the project in May, 2013.	May 2013	
						Content generation, adaptation and distribution in m-learning environment for Mobile phone applications - To identify and develop mobile learning content and to adapt and render the developed content for mobile phones suitable for finishing school students. Also to develop mobile video streaming application and to deploy and distribute the mobile learning content to the students of finishing schools.	Pilot validation of m-learning environment in and around Madurai area which can lead to commercialisation roll out.	September, 2012	

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						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&D labs etc. These projects will be placed before Working Group for deliberations/recommendations before approval by the competent authority.	Appraisal and approval of new projects in the area of E-Learning.	March, 2013	
		Human Resource Development in the country in the area of Information Security.				<ul style="list-style-type: none"> • Launching/ continuation of Information Security Curriculum at B.Tech/ M.Tech/ Ph.D levels and train System Administrators; • Establishment of Information Security labs at Resource Centers (RCs) and Participating Institutes (Pis); • Training faculty of Participating Institutes; • Train Central and State Government Officers; and • Awareness Programmes in the area 	<p>Availability of trained security professionals in Industry/Government.</p> <p>More secured environment for BPO, Commerce and governance.</p> <p>Reduction in Cyber crimes.</p>	March 2013	

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						of Information Security.			
		Human Resource Development in the North-Eastern Region				New NIELIT Centres at Shillong (Meghalaya), Gangtok (Sikkim) and Itanagar (Arunachal Pradesh)	Create skilled manpower in the area of IECT leading to socio-economic development of the region.	Dec 2012 (NIELIT Shillong) July 2013 (NIELIT Gangtok) January 2014 (NIELIT Itanagar)	
		Setting up of Regional Institute of e-Learning & Information Technology at Ajmer (Rajasthan)				Regional Institute of e-Learning & Information Technology at Ajmer (Rajasthan)	Create skilled manpower in the area of IECT leading to socio-economic development of the region.	November 2014	
		IT Skill development for the disadvantaged segments of the society in 9-10				<ul style="list-style-type: none"> • Training in IT Skills to improve the employability of the rural youth belonging to SC/ST & Minority Communities - 48,000 students. • Training program on ITeS-BPO 	To reach IT education to remote corners of the country, including rural as well as disadvantaged	February 2013	

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		States and one UT				(Customer Care and Banking) to improve the employability of the rural youth belonging to Women, SC/ST & Minority Communities - 9,000 students. • Training in Electronics Equipment Repair & Maintenance to improve the employability of the rural youth belonging to SC/ST & Minority Communities - 32,400 students.	segments of population such as SC/ST, OBC, disabled persons, minorities, economically weaker sections, etc.		
		Advanced Faculty Training in Emerging Trends of Hardware, Embedded Systems and Information Technology - C-DAC Hyderabad				• To impart advanced training through innovative and participative learning-teaching approaches within a project based training framework to 500 engineering faculty members. • To conduct ten Workshops/ Seminars on latest technological trends and possible research that can be taken up in IT.	Skilled engineering faculty members with hands-on exposure to industry relevant areas of Information Technology Electronic content development for the training programs conducted. Research Orientation to faculty members who attended the	June 2013	

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							training programs in the area of Electronics, Computer Science and Information Technology. Online Software Process Management course to all faculties to get trained on Software Engineering Practices.		
		Setting up of ICT Vocational Centers for Physically challenged children That will help differently abled children to acquire ICT skills enabling them to seek employment and earn livelihood.				100 ICT vocational centers have already been set up in different States/UTs. The equipment made available for ICT training includes Talking software, Screen Magnification, Talking Typing Teacher and Braille Embosser, OCR and Scanner, CCTV Print Magnifier device with TV for blind, and Assertive Listening Device and Hearing Amplification device for deaf. LAN & Internet connectivity is also provided. These centers are being supported in terms of training and maintenance.	The project will help differently abled children (5000 per year) to acquire ICT skills enabling them to seek employment, engagement and increase in potential for earning livelihood.	March, 2013	

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		<ul style="list-style-type: none"> • Training of educators, Teachers, parents for rehabilitation of mentally retarded Children to set up Interactive ICT training Centers and contents for training of Trainers, educators, parents for rehabilitation of mentally retarded children. 				Technology enablement to enhance interaction of educators, parents, and rehabilitation professionals with children with disabilities and improve their learning abilities.	More empowered and better life of thousands of (5000 per year) Mentally retarded children.	The equipment has been identified and ordered and would be installed/ commissioned by June 2012.	
		Setting up of 250 ICT centres in schools in rural areas of districts Jaipur and Ajmer in Rajasthan.				In the rural schools of Rajasthan in the district of Ajmer and Jaipur 250 ICT Centres in schools have been provided with hardware and software with internet connectivity. The content is under development and teachers are being trained for giving appropriate training to the school level students.	ICT skilled young Students from Schools in Rural Areas	2011-2013	

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		Digital Library Initiatives- <ul style="list-style-type: none"> Digitization / preservation and web enabling of Copyright free data available in physical form 				On-going Projects Digitize: <ul style="list-style-type: none"> 12-15 Million pages Providing bandwidth connectivity to IISC., Hosting the DLI web site for accessing the digitized data	Strengthen Country's identity by digitally preserving the National Heritage and Intellectual output.	March, 2013	
						New Projects Digitize around 15-20 million pages	Strengthen Country's identity by digitally preserving the National Heritage and Intellectual output.	March, 2013	
		Internet Proliferation & Governance Implementation of Internationalized Domain Names in Indian Languages under .IN Registry.				Roll out of Internationalized Domain Names in 7 major Indian Languages namely Hindi, Bengali, Gujarati, Panjabi, Tamil, Telugu and Urdu.	Availability of Domain Names in a few major Indian Scripts-Languages Increase in the number of Internet users. Hosting of local language websites. Overall increase in the number of users on the Internet. Help in development of content in local	June 2012.	

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							language.		
		An Open Source Web Browser for the Blind People				Development of a framework, with the required toolset, to enable the sightless people browse the web. Open Source Web Browser with Text extraction engine; Text to Braille transliteration system in Linux platform; Integration with Braille Devices; Integrating an open source English TTS engine to the web browser; Pilot Deployments, Evaluation and user Testing of the system; Facilitation of browsing through mouse for the blind; Formatting the extracted text into TTS or Braille transliteration engine access format; System Evaluation and Testing	An open source web browser with voice feedback for the blind with speech facilitation for navigation or data entry in a web page.	June 2012	
		Deploying Omnipresent Ethernet Based Data-Centers in Actual Networks – Validation of Project Periscope				Omnipresent Ethernet, indigenously developed by the Principle Investigator through the DIT funded project PERISCOPE (Pragmatic Efficient Reliable Internetworking Solution using Consumer centric Omnipresent Ethernet) in a real network - two-data-centers of a tier-1 service provider. Manufacturing of 50 routers of OEthernet technology; Control plane development; Deployment in MTNL.	A telecommunication product built in India, using Indigenous technology and deployed.	April, 2012	Outcome will be the indigenously developed router deployment with service providers using the

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			Non-Plan	Plan Budget	Comp IEBR				
									data centre is assured upto 85%.
		Virtualized Cloud Computing Infrastructure using Light-trails and Very Fast Switching				To build a cloud based on networking technologies – providing end-to-end services from the application layer all the way to the physical layer. Demonstration of high-speed traffic over the first version of the test-bed; Creation of a security framework for cloud computing; Demonstration of virtualization of resources over 100 km fiber; Study of autonomic two stage control algorithm; Implementation of security between virtual machines. Implementation of admission control and of the two stage autonomic control algorithm and services over 8 node test-bed.	Develop, deploy, test and validate light-trails and Omnipresent Ethernet layer to demonstrate - stand-alone end-to-end service manifested for cloud computing needs; Intricacies of virtualization over a distributed infrastructure would be investigated; Since this is a first end-to-end solution, performance from an end-to-end would be measured so as to showcase applications over a real network.	September, 2013	The project is in the initial phase of study and test bed development.

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Financial Outlays & Projected Physical Outputs/Outcomes

Sr. No	Name of Scheme/ Programme	Objective/ Outcome	Outlay 2012-13 (₹ in crore)			Quantifiable Deliverables/Physical Outputs	Projected Outcomes	Processes/ Timelines	Remarks/ Risk Factors
			Non-Plan	Plan Budget	Comp IEBR				
		Testing and Deployment of IDN Tools, Maintenance and Up-gradation of Policies and Assistance to NIXI – C-DAC Pune				Maintenance and possible emendations to the IDN policies developed in line with ICANN updations; Introduction of new languages and scripts; Deployment and Integration of the 7 languages approved by ICANN; Proposing the remaining 15 languages to ICANN; Creation of tools for prevention of scamming and phishing; Organizing International Conference and IDN stakeholder meetings. Providing variant tables and ABNF's for the 22 official languages. Developing language policies for all 22 languages. Organising language specific community workshops for gathering community consensus. Maintenance & Introduction of new languages and scripts all 22 official languages including alternative scripts, policies, tools like Floating keyboard and fonts etc. Deployment and Integration of the Indian languages that are added by ICANN/IANA in the root zone.	Roll out of domain names in all the major Indian languages	2014	Language character tables and variant tables and language rules are ready for most of the major languages. Community consultation and policy finalization; Beta testing of the domain name registration processes are underway
		Global Internet Governance and Advocacy (GIGA)				Initiating and conducting fundamental and applied research to State and re-state Legal Systems and Instruments and its interface with Internet Technology in every branch of Law Civil, Criminal, Evidential, Fiscal and	Bringing out educational courseware on Internet and its Governance aspects. Including	April, 2012	The areas for research, training and advocacy identified

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						International. Employment / Immigration/	fundamental research in human interface technology. The institution will also undertake advocacy initiatives for industry, law agency and govt in the areas of Internet Governance based on the study carried out with policy makers, international organizations and experts in the domain area.		through a brain storming from experts from industry, academia, judiciary practitioners and government .
		Design and Development of a Dynamic Firewall Solution				Development of a dynamic firewall Evolve adaptive mechanisms (behavior model); dynamic firewall rules; algorithms and mechanisms for validation and consistency verification of the dynamic rules; Re-configuration of the firewall based on consistent and validated set of rules as features of a dynamic firewall as a product.	Design and develop a dynamic firewall that shall provide mechanisms for firewall auto re-configuration, formulation of adaptive rules and ensures the rule and policy consistency.	September, 2012	Project outcome concept demonstrated to the project review team in Dec 2011 and found interesting. Review of

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Financial Outlays & Projected Physical Outputs/Outcomes

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									the project scheduled within 3 months in March 2012.
		Design & Development of Voice based Internet Browsing System in Hindi for the Health Domain				Voice based Internet Browsing System in Hindi for the Health Domain. Deliver voice enabled search system for individuals and Visually Impaired persons.	To design, develop, integrate and deliver voice enabled search system for individuals and Visually Impaired persons. Providing user Interface to query in Hindi in both Textual and Spoken form on the World Wide Web for Education and Health Domains. And Provide Ranked Output results in textual and speech form in the search query language.	March 2012	Project outcome concept demonstrated to the project review team in Dec 2011. Review of the project scheduled within 3 months in March 2012.

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		Shruti-Drishti - Advanced Technology for Visually Impaired using a Novel Approach of PicDhwani (Picture and Character Visualization through Sound).				Develop a prototype system and demonstrate the same through a mobile handset and to teach C-DAC-NISAL Language (C-DAC's Non-Invasive Sound Accessible Lemmatization Language) to a group of young blind children.	The project envisages to convert the stream of images into sound captured by camera. Visually challenged users can visualize the images after training of C-DAC-NISAL language. This will help Visually Challenged and partial blind to recognize and read the text material.	September, 2012	Project under review of the Project review committee.
		Design and Development of a Cooperative High Performance Traffic GENERator for Time-Sensitive Network ANALYSis (GENESYS)				Design and development of a platform to enable generation of high speed, low latency, realistic, highly resolute and precise network traffic and interconnect interface for next generation gigabit transport networks. To develop a Cooperative (PC & FPGA) High Performance Traffic Generator configurable & programmable module to generate / facilitate high speed data transfer capability also to enable pre / post processing and analyze network traffic. Also function as a network	The outcome envisaged is the Design and development of a platform to enable generation of high speed, low latency, realistic, highly resolute and precise network traffic and interconnect interface for next generation gigabit	April, 2014	The lab level study and experiments completed, FPGA based module under development.

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Financial Outlays & Projected Physical Outputs/Outcomes

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						interface for high speed network and protocol wrapper between 40G Ethernet to OTU3.	transport networks.		
		Characterization of UDT for Bulk Data Transfer Applications in High Speed and Wireless Networks				To explore the usage of UDT as an alternative network protocol for Grid, Cloud and Peer-to-Peer applications and enable security in high-speed network performance with the last mile having wireless network. Investigating the usage of UDT for Bulk Data Transfer Applications in High Speed and Wireless Networks - Identify the high speed applications using Grid / Cloud; Transform the applications for the usage of UDT protocol; Design and development of security API's for UDT; Evaluating the performance with the identified applications for security enable UDT protocol and Testing on National Knowledge Network fabric.	Analysis report on usage of UDT for reliable bulk data transfer applications and UDT support for identified applications; Security enabled UDT APIs and Test report providing the performance & throughput details over NKN fabric and last mile wireless networks with Availability of pilot production facility in the organization.	April, 2013	Study and analysis at the lab level under investigation.
		Systems Challenges for Supporting Transient Social Networks - Tata Institute of				To address the systems challenges for the realization of transient social networks, a community of users with mobile devices that come together for social activities of common interest (village market, emergency response,	Architectural specification of transient social network system, and a prototype system for enabling	March, 2014	

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Financial Outlays & Projected Physical Outputs/Outcomes

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		Fundamental Research, Mumbai				disaster management etc.).	Transient Social Networks for various applications		
		Mobile Healthcare Management Test-bed for Pro-preventive Healthcare using Next Generation Wireless Technologies				To build a mobile healthcare management test-bed that will include research and development of the following systems: (a) Performance evaluation of an end to end mobile solution to collect, store and maintain health data in a mobile computing device; (b) Develop and evaluate algorithms for secure downloading/viewing and diagnosis of high volume medical image/video data by physicians using mobile broadband wireless networks.	Development of a mobile healthcare management test-bed that will facilitate pro-preventive, primary and healthcare nationwide. Mobile technologies like BlackBerry and Android will be used towards development of all the components of this test-bed. The Android 3.0 operating system is optimized for mobile devices with large tablet-like screens.	March, 2014	

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Financial Outlays & Projected Physical Outputs/Outcomes

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		Distributed Computation on Distributed Data: Theory and Practice - Indian Institute of Technology				To explore the fundamental limits of distributed computing, as a function of communication capabilities in a pervasive system in various computing & communication scenarios, characterize and develop efficient algorithms to compute functions of distributed data. Demonstrate solutions via a proof-of-concept implementation in pervasive computing applications of practical interest.	This project will address this trade-off, and develop efficient algorithms for distributed computation of functions of interest in practical pervasive systems. The project will yield an understanding of the interaction between computation and the capabilities of the underlying communication network.	March, 2014	

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		IPv6 based Cluster Computing Infrastructure to provide Citizen services by the State Govt. of Himachal Pradesh				Build a pilot for IPv6 adoption across the state and Provide two citizen services applications as Software as a Service (Saas) <ul style="list-style-type: none"> • Himachal Roadways Transport Corporation • HP Board of School Education Build a Cluster Computing infrastructure to help ease provision of hardware and software infrastructure for deploying applications in an optimized and redundant environment.	Build computing infrastructure on the IPv6 enabled platform Host the Software Portal on the IPv6 computing environment	October 2013	

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20.	Facilitation of Setting-up of Integrated Townships (e-Infrastructure)	Facilitation of Setting up of Integrated Investment Regions (ITIRs). IT/ITeS units in the State/UTs.	-	0.10	-	Information Technology Investment Regions (ITIRs) set up in different States/UTs.	Decongesting existing cities and provide additional productivity and employment generation through ITIRs proposed to be established.	These are long term processes proposed during 2012-17 (Phase-I)	Proposals have been received from 4 States namely Andhra Pradesh, Karnataka, Tamil Nadu and Odisha. These are under process.

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21.	Secretariat (Economic Services)	<ul style="list-style-type: none"> • Secretariat & Bldg. • Foreign Trade • Exhibitions Others - Seminars/ Workshops 	31.30	43.67	-	<ul style="list-style-type: none"> • To meet running expenditure of the Secretariat and Plan Schemes • CST re-imburement of STPI units • To organise exhibitions abroad for promotion of Trade To organise seminars/workshops for development of electronics in IT 	<ul style="list-style-type: none"> • To run office smoothly. • Export promotion • Trade promotion • Development of electronics in IT 		

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22.	National Informatics Centre (NIC)	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.	-	754.00	-	Cyber Security Network and application security audit and hardening Securing new Data Centres. Enhancement of security at NIC State centres. Providing different level of Cyber Security training to NICNET users.	Enhanced security of NICNET and services	March, 2013	
						Certifying Authority Setting up New Registration Authorities (RA)	DSC Subscribers will be serviced by three new RA offices in NIC States Centres to enable better support to the subscriber and reduce the delivery time	March,2013	
						Enhancement of CA Services for promotion of e-Governance	Augmentation of CA Services to cater to specialized application of e-governance and enhance the security features of e-Governance applications.	March,2013	

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						<p>Design, Development, implementation of e-Governance applications at various locations/sites in sectors such as :</p> <ul style="list-style-type: none"> • Public Distribution (e-PDS) • Govt. Procurement (e-Procurement) • Health (e-Hospital) • Office Management (e-Office) • Judiciary (e-Courts) • Rural Development (MGNREGS, Panchayat Suite, RuralSoft etc.) • Transport (Vahan, Sarathi) • Immigration, Visa and Foreigners Registration & Tracking (IVFRT) • Property Registration • Land Records etc. 	<ul style="list-style-type: none"> • Faster services to citizen • Ease of use for end-users • Better management <p>Resulting in better e-Governance</p>	March 2013	

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						<p>Videoconferencing infrastructure development</p> <p>15 State units and some selected district centers would be augmented with additional VC facility</p> <p>7 states having more than 30 districts would be augmented</p>	<p>More usage and better communication facilities.</p> <p>To meet local needs and improvement of VC facilities.</p>	<p>Dec- 2012</p> <p>Sept-2012</p>	
						<p>Remote Sensing & GIS</p> <p>National GIS Infrastructure, Image as well as vector GIS services, priority sector applications & training</p>	<p>Service Oriented National GIS Framework with Web Services/APIs to service various E-governance & planning users</p>	<p>March 2013</p>	

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						Data Centre <ul style="list-style-type: none"> • Enhancement of NDC at Shastri Park and NDC, Pune. • Enhancement of NIC State level Data Centres. • National Data Centre at Bhubaneswar to be established. 	To provide robust and scalable infrastructure at National Level for e-governance services.	December, 2013 October, 2012 March, 2012	
						High Speed Terrestrial Circuits Operationalisation of connectivity capacity and Bandwidth Creation of multiple virtual private network to cater various mega e-gov projects	To facilitate various Pan-India e-gov projects	March, 2013	
						NICNET International Gateway project Gateway Bandwidth will be upgraded to 20 Gbps	Enhanced and efficient availability of Internet Services	March, 2013	

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23.	National Knowledge Network (NKN)	The objective of the National Knowledge Network is to bring together all the stakeholders in Science, Technology, Higher Education, Research & Development, and Governance with speeds of the order of gigabits per second coupled with extremely low latencies; through PoPs in the respective institutions/ organisation.	-	360.00	-	<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 & 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> <p>Target for 2012-13</p> <ol style="list-style-type: none"> i. To complete the NKN backbone for the CORE (which includes all the POPs at the State level). ii. Extending the NKN connectivity to additional 350 institutes. iii. Completion of the infrastructure work and operationalisation of all POPs at state level. iv. Create various Test-bed infrastructures for research in the field of networks and security. v. Facilitating implementation of model projects indentified by MPEC and monitoring them on a 	The NKN will facilitate the knowledge sharing in 6 verticals including medical, education, 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.	End of 2012-13	

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						<p>timely basis.</p> <p>vi. Establishment of international R&D connectivity & internet gateways.</p> <p>vii. International connectivity with other NRENs.</p> <p>viii. Extending the NKN connectivity to secondary PoPs of NKN at the district headquarter level.</p> <p>ix. Operationalisation of Data Centre at NKN to deliver common services (as mentioned in the figure) to all the member organizations and establishment of a full-fledged Network Monitoring Centre.</p> <p>x. Procurement of equipment for connecting the remaining institutions under NKN.</p>			