

## IV. INFORMATION TECHNOLOGY AND e-GOVERNANCE

### 1. INTRODUCTION

'Information Technology and e-Governance' (IT-eG), group was formed during mid of the 10<sup>th</sup> Plan period in order to create an IT enabled work environment in the Department through accelerated usage of various Information Technology opportunities. Primarily aims to convert the existing procedures and processes into *citizen centered*. IT-eG division implements e-Governance in the Department progressively that need be in conformance to the National eGovernance Action Plan. For the implementation of an IT Action Plan IT-eG Division operates on a separate IT Budget Head that came into effect in DSIR since FY 2004-05.

### 2. IT ACTION PLAN

For IT and e-Governance activities a comprehensive IT-Action Plan in the department as formulated in line with the Government directions issued during Tenth Plan remains :

- *Infrastructure Development:* Provide and maintain Personal Computers (PCs) and other essential IT- equipment and software to all the functionaries.
- *Networking:* Up gradation, extension and maintenance of the Local Area Network (LAN).
- *Office Automation:* Implement various applications software that not only maintain records of receipt, issue of letters and movement of files but also offer enhancement in accountability, responsiveness and transparency in governance.

- *IT Training:* Provide relevant training courses to the officers/ staff that enable them to work on computers by using application software developed.
- *e-Reports:* Convert the Acts, Rules, Circulars and other published materials of interest or relevance to the public, in the electronic form.
- *Website:* Enrich the contents of the DSIR website by including downloadable forms and guidelines relevant to various citizen services that Department provides.
- *IntraDSIR:* Enrich the contents of the IntraDSIR by including downloadable forms and circulars relevant to employees of the Department.

### 3. ACHIEVEMENTS

Organized weekly meetings to review the progress of the activities initiated on the project entitled 'Design, Development, Implementation of Enterprise Application and Maintenance Support Services for DSIR' in addition to various other meetings of IT Committee to seek guidance/ approval on procurement of IT related hardware and development of application software that facilitated to mutate the departments stature and also to become IPv6 compliant. An IT-centric work environment has been already created in the Department as various client server applications remained operational whereas a few important one would be added up as they are being developed. It is ensured that all applications now being developed need remain both IPv4 and IPv6 Compliant. Most of hardware procured more than

six years earlier and IPv4 compliant remain deployed in use have been planned to be phased out.

All the processes to select consultant for 'Design, Development, Implementation of Enterprise Application and Maintenance Support Services for DSIR' were completed. The entire process was made transparent by hosting all those stepwise information on DSIR website at <http://www.dsir.gov.in/erp/erp.htm> as and when they were finalized. M/s Newgen Software Technologies Limited thus received the letter of Intent and has executed two Business Agreements with DSIR for RFP1 and RFP2 on 26<sup>th</sup> August 2011. The RFP1 includes Enterprise Integration, Program Implementation and eService Delivery and RFP2 includes Office Automation Solution, Workflow Management, Record Management, and Data Warehousing

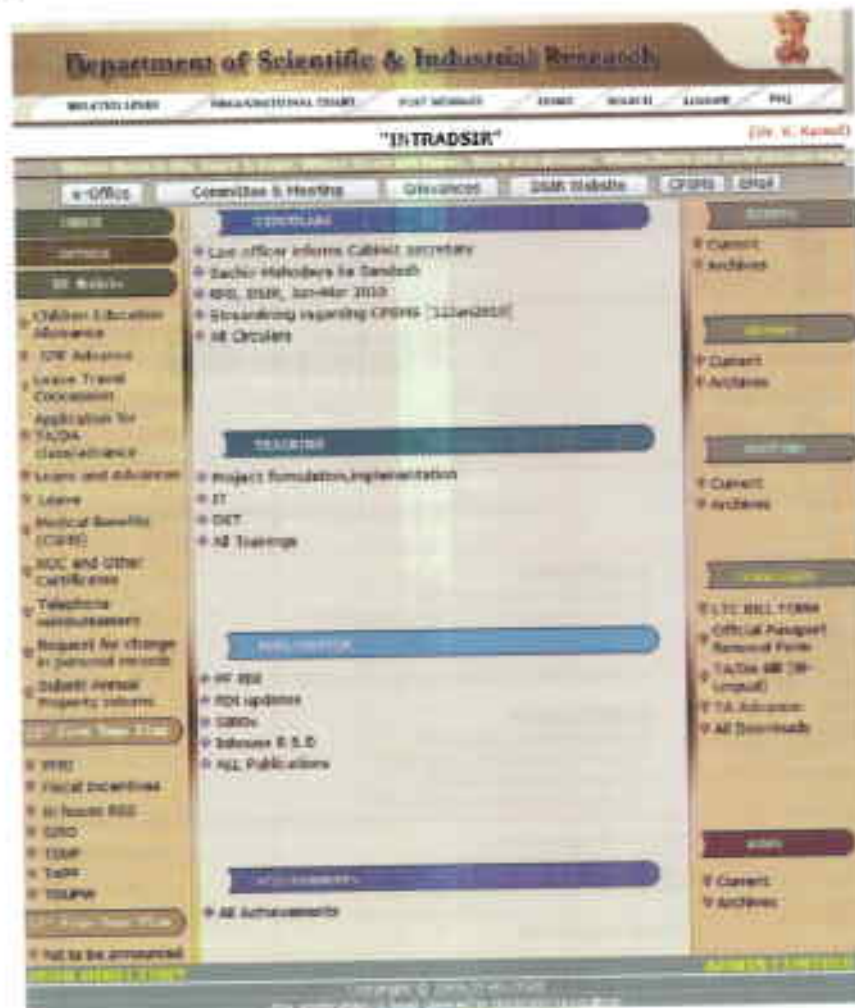
The details of achievements are given below:

### 3.1 Applications Developed and Used

Various client server application systems that were developed in-house and remained effectively deployed in DSIR are given below:

#### 3.1.1 'IntraDSIR'

INTRDSIR remains as an effective messaging client having provision of attaching files and sending the same to other employees with pop up facility, it intend virtually to eliminate flow of paper based intra-office/ inter-office memos and similar documents. The built-in functionalities of this application running on the intranet of DSIR being bulletin board service, employees information and their access to monthly pay-slips, thought of the day. It has been provided with Links



to Public Grievance Portal, DSIR website and NIC mail for day to day reference. This has also been identified to act as a secured access site for all DSIR employees to other developed/developing applications of eGovernance.

A web-based ERP solution that is being developed for DSIR would also be securely integrated to view and internally process the online received applications from various stakeholders through newly created ExtraDSIR over the DSIR's re-designed website. For the purpose to submit the applications online, some of those prospective users have already been provided IDs and passwords. For internal processing of their received applications would then be carried out by DSIR employees under login on IntraDSIR where the access to other modules like eOffice, Committee & meeting and HR may also be possible in secured mode. For this purpose an LDAP has been planned.

### 3.1.2 Integrated Finance, DDO and Utilization Software (IFDUS)

Integrated Finance, DDO and Utilization Software (IFDUS) has been developed for DSIR and made

fully operational. The bills for Salary, Contingency, TA/DA and LTC Advance and Other Advances are prepared and processed. The system is also put under an effective AMC.

### 3.1.3 DSIR Website

A website of the Department namely at <http://www.dsir.gov.in> is continuously being updated. The static contents regularly updated and are available on this site includes: Our Minister; About Us: Introduction, Administrative Setup, Organisational and Functional Structure, Telephone and Email Directory; Promotion of Official Language, Detailed Demand for Grants, Plan Documents, Citizens Charter, Results Framework Document; TDPU Programmes: IRDPP, TDDP, TePP, TDUPW; List of Projects Supported under TDPU Programmes; Download Forms: IRDPP, TDDP, TePP, TDUPW; Publications: Creative India, Consultancy Vision, Information Today & Tomorrow, R&D in Industry Update, TCDPAP Focus, TePP eNews, Tech Motivator, Technology Exports Newsletter; Technical Reports: Prepared under Technopreneur Promotion Programme, Technology Information

The screenshot displays the official website of the Department of Scientific & Industrial Research (DSIR). The header identifies the Ministry of Science & Technology and the Department of Scientific & Industrial Research. A navigation menu on the left lists various sections such as Home, About DSIR, and various programs. The main content area is titled 'Technology Promotion, Development and Utilization Programmes (TDPUs)'. It lists several 'Current Programmes' with their start dates: IRDPP (18/02/11), TDDP (23/04/12), TePP (18/03/11), and TDDPW (18/02/11). Below this, 'Eminent Programmes' are listed with dates: TDDPW (26/02/10), TDDP (18/04/10), TePP (11/02/09), and TDDPW (11/04/10). The footer provides contact details for Prof. Sanku K. Bhattacharya, Secretary, and states the page was last updated on January 3, 2012.

Facilitation Programme, Technology Management Programme, International Technology Transfer Programme, Executive Summary of 162 Technology Status Reports, Exportable Technologies / Projects from SMEs, Scientometrics; RDI Directories: RDI, SIRO and PFRI; Annual Reports in Hindi and English (1990-1991 to 2009-2010); Circulars, Advertisements, Tenders, Vacancy, Forthcoming Events, Useful URLs; Guideline for the Grantee Organizations / Institutions / Individuals of DSIR to register at CPSMS, Link to Public Grievance Portal at <http://pgportal.gov.in>, Controller of Accounts at <http://www.praccmst.gov.in>; Autonomous Bodies: CDC and CSIR, Links to their official websites; Public Sector Enterprises: CEL and NRDC; Links to their official websites; United Nation Agency: APCTT-UNESCAP, Links to their official websites, Parliament Qs and As: Lok Sabha and Rajya Sabha; Links to their official websites, Disclaimer, Sitemap, Copyright Notice. A link has now also been provided that facilitate online submission of application on Renewal of recognition of SIRO/ in-house R&D. The proactive disclosures under Section 4 (1) (b) of the RTI Act 2005 enacted on June 15, 2005 are regularly updated and available on the DSIR Website at <http://dsir.gov.in/rti/rti-dsir.htm>.

### 3.1.4 Composite Pay Roll System

A Composite Pay Roll System, developed in-house, has been used in the department for preparation of bills for Salary, all advances, arrears and allowances. The same system is used for calculation of Income Tax and Preparation of Form 16 and e-TDS (quarterly and annually). The system also has an interface for sending transactions to the Bank

## 3.2 Applications Used

Following web-based applications systems developed by other departments have been successfully adopted and used:

### 3.2.1 CPSMS

A web enabled application, Central Plan Scheme Monitoring System (CPSMS) at [http://](http://cpsms.nic.in)

[cpsms.nic.in](http://cpsms.nic.in), was developed in the office of the CGA to serve as a common platform for monitoring of the Central Sector and Centrally Sponsored Schemes. The Sanction ID Generation (SID) Module was accordingly launched on 1st April 2008 and was hosted on the e-Lekha platform. All sanctions issued by the Central Ministries under the Plan Schemes are now identified with a unique Sanction ID that enables the tracking of releases as per their accounting and budget heads across the different implementing agencies.

Implementation of CPSMS is fully functional and operational. Various MIS Reports are generated from CPSMS as and when required.

### 3.2.2 Portal for Public Grievances

Department remained equipped with a Public Grievance Redress & Monitoring System (PGRAMS) available at <http://pgportal.gov.in> that was designed and developed by National Informatics Centre (NIC) as per guidelines of Department of Administrative Reforms and Public Grievances (DAR&PG). Being a Web-based system, it remains available centrally to the public accessible at DSIR website and for DSIR employees within the Department remains accessible at IntraDSIR. Nodal officer has the ID and password and hence submitted grievances through this system to the Department get attended regularly.

## 4 ON GOING IT-EG ACTIVITIES

A project entitled 'Design, Development, Implementation of Enterprise Application and Maintenance Support Services for DSIR' has been started to facilitate a highly productive and user-friendly, electronic knowledge-based workplace in DSIR so as to offer effective C2G & G2C services ensuring minimized overheads and prompt information availability, while adhering to Government of India Rules, Regulations and Policies, pursuing some key interventions through IT enablement of processes while building Enterprise Resource Planning (ERP) Solutions. Under this effort the comprehensive set of



initiatives have been included that aim at transforming DSIR into embracing a performance culture - leveraging process redesign, automation of administrative procedures, enhancing collaboration/ networking, clarity in definition of roles (individual/ team/cross-functional), analysis of required skill sets for various roles, augmenting team performances, workplace learning and mentoring, analysis of required skill sets for various roles, augmenting team performances, augmenting of skills, knowledge sharing, implement electronically enabled work places, electronic self services, and transparent mechanisms for decision support / enhanced efficiency at all levels. Following two major categories of initiatives are taken up for DSIR transformation through building electronic enablement of the processes.

#### 4.1 Enterprise Integration, Program Implementation and e-Service Delivery

Under this initiative various web based application modules are being developed to facilitate the department in information dissemination as well as reproduction in a desired form leading to automation of all functionalities/mechanisms of the department relating to the implementation, operations/functions and performance assessment of grants-in-aid Scheme that catalyses the Indian industrial R&D efforts as well as supports for the Autonomous Bodies (CSIR & CDC) and Public Sector Enterprises (CEL & NRDC).

Following different applications as covered under RFP1 under cluster approach have been developed and are now under validation and UAT:

##### 4.1.1 An ExtraDSIR

To enhance efficiency and transparency on the internal operations towards service delivery of an important component of a plan scheme TPDU of DSIR namely Industrial R&D Promotion Programme (IRDPP), ICT based Governance system has been created with electronic submission of applications for registration / recognition / renewal of recognition for In-house



R&D units & SIROs, Fiscal Incentives for Scientific Research, & PFRI. This system replaces the manual mode together since includes design & development of databases and implementation of associated procedure for electronically processing the data submitted through e-applications and post-implementation managed services / support. With the development and availability of the portal, the Institute/ organization/ individual as the case may be, can login using their authenticated ID and password using login button available at Home pages of DSIR's existing website as well as on the revamped website.

submission and on-line processing of the applications within DSIR like receiving the applications, creating abstract of the application, formation of committee members and its scheduling, preparation of minutes of the screening committee meeting, certificate generation and reports. Other components built are for request on institute name change, duplicate certificate, return submission etc.

#### 4.1.3 Scientific And Industrial Research Organizations

Online application for renewal of recognition of Scientific And Industrial Research Organizations (SIROs) has been developed with provision of accounts creation for all organizations which are now due for renewal in March 2012 and can submit their renewal of application online. The system can generate PDF of their submitted application and inform them on the status of their application.



#### 4.1.2 Public Funded Research Institute

An system for on-line submission of application in web-enabled form as per the prescribed application format, has been developed for Public Funded Research Institute (PFRI) programme to cater to the processes on registration / renewal of recognition of PFRI.

The main components of this application for PFRI programme includes: online application

Such SIROs have been advised to apply for renewal of recognition well in advance (three months prior to the date of expiry of recognition) and their applications when received for renewal of recognition on line would then be electronically processed following those steps otherwise were followed manually i.e. from preliminary screening till granting and issuing the renewal of recognition. The required reports, alerts, and status information would get generated and communicated instantaneously with the help of already created Templates.

#### 4.1.4 In-House R&D

System for online application submission on renewal of recognition of In-House R&D has been developed which also includes accounts creation for all companies which are due for renewal in March 2012. On submission of renewal of application online, this system can generate PDF of the submitted application and applicant may check status of their application. Currently it includes online submission of details of each in-house R&D units separately.

#### 4.1.5 Fiscal Incentives (Form 3CL)

Online application for Submission of report in FORM 3CL has been developed. The system includes - accounts creation for all companies which are due for submission of report, submission of application online. For user experience, system provides here also those logical steps namely (i) Generation of PDF of submitted application and (ii) Checking the status of the application online.



#### 4.2 Office Automation, Workflow Management, Record Management and Data Warehousing

Under this initiative, Design, Development and Implementation of Applications for automation of

various administrative processes to enable build the electronic knowledge based work places within DSIR, implementing collaborative models/networking interfaces with its Autonomous Bodies (CSIR & CDC) and Public Sector Enterprises (CEL & NRDC), developing standard operating procedures and policies/practices for systems Management are included.

Following different applications as covered under RFP2 have been developed and are now under validation and UAT:



#### 4.2.1 HR Module

Online application for complete HR module has been developed and data collection and population remains in progress. This application includes automation of all the activities related to HR process including (i)Loans & Advances, (ii) House



Building Advances, (iii) GPF, (iv)Natural Calamity Advances, (iv) Children Education, (v)Telephone Reimbursement, (vi) Small Family, (vii) Leaves etc which are all accessible by DSIR employees through IntraDSIR.

#### 4.2.2 eOffice (eDak & eFile) Module

This module has been designed according to the currently practiced eDak system in DSIR. The available GUI in this product for End Users designed in .NET, helps display the web forms and save the data and to move according to the route defined to the selected user. It facilitates the physical storage of Daks in an Electronic Form. The product provides the mode of selecting a dak either through the local hard drive of computer of an end user, or simply by simply scanning the Dak through Scanner and importing to the desired location. Each eDak can be clicked and opened for providing a user-friendly view to the user.

The product also provides facility on the physical storage of Files in an Electronic Form. The eFiles can be viewed by the users once they have been granted access rights to view or modify them. A file section provides a list of files that can be accessed by this user. Each file may comprise of several eDaks. Information related to each eFile would be associated with it which can also be viewed by the user.

#### 4.2.3 Committee and Meeting Module

The committee and Meeting Module provide the Convener of DSIR to constitute a committee. Using this module the concern forms a Committee's Name along with the Members for Committee Approval, thus it is electronically routed to the members for their approval in form of Accept, Reconsider or Seek Clarification from the Convener of the DSIR. After the grant of approvals, convener finally could constitute the committee and Notify it as an Office Memorandum to the stakeholders of this committee.

#### 4.3 Re-designed DSIR website

The existing website for DSIR although being content-rich, it is static in nature. Re-design of the



existing website was taken up to ensure that it becomes dynamic & database-driven in nature thereby all data would reside on a central database and changes made to this data would automatically get reflected at all relevant sections on the website. The frequently visited links (Home, Tenders, and Contact Us, ExtraDSIR etc.) have been placed prominently, facilitating quick navigation between different pages. The Graphical User Interface (GUI) of this re-designed website aimed to be user-friendly and rich in appearance since uses superior graphics, self-explanatory, promptly guiding the user to different sections, offer appropriate navigation assistance to user in the form of tooltips, messages, images etc. wherever required / applicable. The user can switch between different themes / color schemes, and choose the font-size out of a number of pre-defined sizes as per their convenience. Once fully developed it would be compliant to Standards & Guidelines namely as (1) UUU Trilogy – Usable, User Centric, and Universally Accessible (2) Government of India Web Guidelines (GOIWG) issued by the Government of India and offer an easy-to-understand navigation and would be bilingual - supporting English and Hindi languages. The re-designing of website was taken up also for easy and seamless integration with other automated systems developed/being developed offering compatibility and smooth data flow between applications yet ensuring the security by means of Passwords, Secure network and encryption of data (https).



