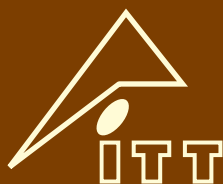


ANNUAL REPORT

2002-2003



Foundation For Innovation and Technology Transfer

Indian Institute of Technology : Delhi
Hauz Khas, New Delhi - 110 016

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INTRODUCTION

The year 2003 marks 11 years since the Foundation for Innovation and Technology Transfer (FITT) was registered as a Society by the Indian Institute of Technology, Delhi (IITD). The mission of FITT is *“to be an effective interface with the industry to foster, promote and sustain Commercialization of Science and Technology in the Institute for mutual benefits”*.

The first and foremost principal objective of FITT is promoting interaction between the Academia and Industry in a proactive manner to create greater measure of trust and collaborative work, which benefits both. Right from its inception, FITT has been directing its efforts as an effective interface between Academia and Industry by marketing the “intellectual ware” of IITD to industry on competitive terms and injecting industrial relevance to IITD's teaching and research activities.

FITT offers a number of flexible modes and mechanisms in IITD for enhancing interaction with Industry-leading to Technology Transfer. These include faculty visits to industry, visits from industry to IITD, participation in industry exhibitions and presentations to industry/industry associations, special and customized continuing education programs and technology development/R&D oriented consultancy projects etc.

In the past eleven years, the world has seen many changes, India has graduated from a closed “License Raj” environment to a liberalized economy. Revolutionary progress in the Information Technology and Telecommunications has changed the way industry, academia and government functions. FITT has been in the forefront of facilitating the change process in IITD by giving boost to some of its programmes and starting some new initiatives. FITT has enhanced efforts towards safeguarding Intellectual Property Rights (IPR) of faculty and researchers of the Institute, through measures like seminars/clinics to increase the awareness among the faculty and researchers, and streamlining the processing of IPR applications. To encourage entrepreneurship based on technological innovation, a partnership mechanism is evolving at the Institute in the form of Technology Business Incubation Unit (TBIU) programme in the IIT Campus with FITT acting as its administrator.

FITT utilizes all the resources and infrastructure of IIT Delhi without duplicating it. More than 440 faculty scientist and researchers are the potential contributors to R & D and technology development efforts leading to technology transfer in FITT. However, teaching and research supervision being their primary activity, in any given year typically 15 to 20% of the faculty is involved in work with Industry. FITT can avail the additional services from both public and private institutes outside IITD to complement those available from IITD.

The activity profile of FITT and charts indicative of FITT's progress over the last year are given in the chapters of this Report, Annexures and Appendices.

FITT ACTIVITIES

A. DISSEMINATION OF IITD/ FITT MISSION AND PROGRAMMES

The primary activity of FITT is to reach out to the Industry/ Industry Associations on one side and to the IIT Delhi faculty and researchers on the other. This was pursued vigorously during this year. The objective was to bring industry and academic community a step closer. Following activities were carried out towards that end.

1. FITT Forum, the newsletter brought out by FITT periodically publishes all the important activities and events held in IIT Delhi and FITT and one issue featured the 50 years of IIT system. The newsletter reaches 3000 industries, R & D organizations, government departments and academic institutions and is sent free of cost.

2. Visits of faculty members of IITD to industries are arranged periodically. Industry representatives are invited to make a presentation to a group of faculty from IIT Delhi highlighting their priority R & D areas and opportunities for collaborative work with IIT Delhi. Several meetings were organized by FITT for visiting delegations from various countries and industries as outlined below:

- A three member Chinese delegation at the instance of APCTT visited FITT on 31st August 2002 for establishing linkages with relevant technology development/transfer/utilization agencies in India.
- Visit by Sandip Ghosh of M/s Grundfos on 4th February 2003 at FITT & IIT Delhi.
- Visit by Mr. Rohit Bahadur of M/s. Ernst & Young Pvt. Ltd. on 18th September 2002.
- Visit of Mr. ShriKumar Suryanarayan President (R & D) & Dr. Arun Chandavarkar (President-Group Manufacturing) of BIOCON on 22nd October 2002.
- Visit by Dr. Kiran Mazumdar Shaw of BIOCON on 6th November 2002.
- Visit by Dr. Jibanananda Khuntia, National Co-ordinator (EA, R & D), Value addition (R & D), National Innovation Foundation on 7th November 2002.
- Visit by Vice Chancellors of various universities at TBIU and Director's office on 7th December 2002.

3. M.D, FITT has visited various institutions and contributed his views. Some major events of these are:

- * Presentation in a seminar on India's Emerging Innovation System at Jawaharlal Nehru University on 27th September, 2002.
- * Presentation on “*Academic Institutions as Knowledge Enterprises*” at National Conference on “Emerging Trends in Engineering Education” on 25th & 26th October, 2002 at Aurangabad.
- * Presentation in “Higher Education Summit” organized by CII at Chandigarh on 20th December, 2002.
- * Participated in a workshop on IPR organized by WITT at IIC Annexe on 14th January, 2003.
- * MD visited Aravali Institute of Management at Jodhpur on 17-18 January, 2003 and made a key note address on Industry- R&D Interface Issues.
- * Presentation on Technology Business Incubation Unit Programme of IIT Delhi during ELITEX on 29th April, 2003, at IHC, New Delhi.
- * MD participated in National Workshop on “Knowledge based venture Creation” during 23rd to 25th October 2002 which was organized by International Advanced Research Centre for Powder Metallurgy and New Materials (ARCI) at Hotel Viceroy, Hyderabad.
- * MD addressed Scientists on “*IPR and Technology Transfer Issues*” at Indian Jute Industries Research



Association, Kolkata on 29th July, 2002.

- * Presentation on “*Marketing of Technology*” at a seminar organized by Consultancy Development Centre, New Delhi on 21st November, 2002.
- * Presentation on “*IPR for Higher Educational Institutions*” during conference on IPR at Jawaharlal Nehru University on 5th November, 2002.
- * Presentation on “*University-Industry Partnership- The FITT experience in IIT Delhi*” at the Conference held in February, 2003 to celebrate 30 years of ICSR Division in IIT Madras.

4. FITT participated in the Exhibition “Industry-Institute Networking forum-Driving Knowledge Partnership” which was held on July 9-10th 2002. It was organized by the Confederation of Indian Industry(CII) and sponsored by the Council of Scientific & Industrial Research (CSIR), Department of Scientific & Industrial Research (DSIR) and ICICI Bank.

5. FITT organized an evening with the Angel Investors and Technology Start-up Mentors in collaboration with The Ind-US Entrepreneurs(TiE) on the theme “Business Development in Storage Area Networks” on 15th May 2002. The speakers included: Kumar Malavalli, CTO and Co-founder of Brocade Communication System & Brenda Christensen, an independent Marketing & Business Development Consultant on networking (Clustering) and Fiber Channel Industry. Various executives of FITT participated in activities related to their own domains, which helps FITT in networking with other organizations with similar mandate.

6. Mr. K.K.Roy, Executive Consultant (Tech.) participated in Higher Education Summit organized by CII and held at Chandigarh during 20th-21st December 2002. A presentation on Technology Business Incubator with IIT Delhi as a case study was made.

7. Mr. Mohit Mahajan Executive Consultant (IPR and Technology Transfer) participated in a seminar titled “IPR & Technology Management at IIT Kharagpur on 3rd January 2003. He also participated in the 18th National Conference on In-house R&D, in Industry, being organized by FICCI with DSIR on December 9th & 10th at New Delhi

8. Mr. Partha Bhattacharya, Executive Consultant (I & D) attended the XXIII IASLIC National Seminar on “Digital Information Systems and Services from 27th December to 30th December 2002, at Punjabi University, Patiala. He also presented a paper titled Role of FITT Information Centre for the Assistance of Small Entrepreneurs at the SIG (special Interest Group) meet during the seminar.

9. FITT has re-organized its web-site on the net (<http://www.fitt-iitd.org>). The web site provides information on important current activities of the Foundation. The newsletter FITT Forum is automatically posted on the website, as well as extracts from the Annual Report are also posted on the site. FITT site is also hyperlinked with webpages of IIT Delhi and the IITD Alumni Association; specially with the database on the expertise and facilitates resident with the faculty members, scientists, departments and centers of the Institute. Linkages is also possible to web pages of all other IITs at Kharagpur, Kanpur, Mumbai, Chennai, Guwahati & Roorkee, IISc (Bangalore), JNU and a large number of technology organizations in the Govt. and private sector.

B. INTELLECTUAL PROPERTY RIGHTS (IPR) ACTIVITIES

Scientific and technological advancement is an important catalytic factor in industrial development and in turn, nation's prosperity. The people behind such technological advances are the inventors and researchers who create Intellectual Property, which needs to be protected.

FITT has been taking proactive steps in protecting IPR for technologies developed by IITD faculty and students and processed and filed 108 IPR applications between 1998 and 2000 which include Patent, Design and Copyright applications. In 2000-01, 12 IPR applications were filed. During the year 2001-02 14 IPR applications were examined by the IPR Standing Committee of which 12 were approved, out of which 9 applications were filed. During the year 2002-03 21 IPR applications were filed.

The list of these along with their status is given in *Appendix I*.



- Comprehensive Patent Search at different Patent Office sites and subject organization sites is carried out in FITT for the technologies at IITD.
- Qualified Attorneys specializing in the subject area of invention are invited as expert to the IPR Standing Committee's meetings to obtain independent professional opinion on the patent ability of the inventions.

C. TECHNOLOGY TRANSFER

One of FITT's main activity is transfer of technologies developed at IITD for commercialization. Since April 2002, FITT has licensed 3 technologies to industry clients for fees of Rs. 1.70 Lakhs, plus periodic royalty payments.. A list of technology transfers contracted during 2002-2003 through FITT is given in *Appendix II*.

D. TECHNOLOGY DEVELOPMENT AND INDUSTRIAL PROJECTS

It is a recognized fact that technology development and its subsequent transfer to industry from an academic institute are often best accomplished through pursuance of short to medium term problem solving industrial projects. Such projects help the faculty to appreciate industry requirements at ground level and establishes rapport with industries.

A lot of thrust has been put on such projects by IITD faculty and FITT has facilitated in executing them effectively. This activity has been growing over the years.

During the year 2002-03, 41 projects were contracted at a value of Rs. 274.66 Lakhs. A sample list of important projects contracted during the year 2002-03 is given in *Appendix III*.

E. HRD ACTIVITIES

Continuing Education for industry has been a sustained activity as an important focus area of FITT and a means to initiate projects on Technology Development and Transfer. During 2002-03, the number of HRD programs held with participation from industry were 12 at the gross value of Rs. 31.7 Lakhs. *Appendix IV* lists the HRD activities undertaken by FITT during the year 2002-2003.

F. CORPORATE MEMBERSHIP OF FITT

A major objective of FITT is to have a formal and effective relationship between the industry and the Institute on a mutually supportive basis. One mechanism for formalizing this relationship is to offer corporate membership to industry, Industry Associations and user-service organizations on payment of nominal fees. At present, there are about 80 corporate members of FITT. They are on the mailing list of FITT for all the programmes conducted at the Institute. Corporate membership of FITT are offered to all industry clients, who have assigned FITT with consultancy projects worth Rs. 2.50 lakhs or more.

Besides getting a 10% concession in the participation fee in HRD programmes organized under the aegis of FITT, the following support services are offered to the Corporate Members of FITT:

- ▶ Newspaper Clipping Services, Magazine, Article services.
- ▶ Content page services from Journals of IIT Delhi Central Library.
- ▶ Library consultation cards, full length Article from Journals and Patent Information search are given on request.
- ▶ Information about Seminars, Conferences, Workshops etc. being held at IIT Delhi or elsewhere.
- ▶ CD-ROM search services from Central Library, IIT Delhi and from FITT Information Centre
- ▶ FITT-FORUM Newsletter.

A list of Corporate Members of FITT as on 31st March, 2003 is given in *Appendix V*.



G. MARKETING OF EDUCATIONAL VIDEO PROGRAMMES

The Educational Technology Services Centre of IIT Delhi develops single concept and full course video programmes. These video products are marketed by FITT. The gross value of the video products sold by FITT from 1993 till 2003 has touched a figure of around Rs. 67 Lakhs. The beaming of few such programmes through the 'GYANDARSHAN' channel of Doordarshan is being organized under the project name 'Technovision.'

H. INFORMATION SUPPORT SERVICES

FITT provides periodic service to its corporate members in the form of news items, clippings, technical bulletins on their areas of interest and making available copies of literature/documents requisitioned by them. FITT has augmented further its information service capabilities. FITT is now in a position to help in patent search and facilitate procurement of specific documents from India and abroad for the faculty of IIT Delhi.

I. NATIONAL TECHNOLOGY DAY CELEBRATION

The National Technology Day was celebrated at IIT Delhi on Sunday, the 11th May 2003 with a well attended seminar meeting in the Senate Room of the Institute. The function was organized under the aegis of FITT. Prof. Surendra Prasad, Dy. Director (Faculty) presided over the function. Prof. Prasad emphasized on the importance of technology and technology education as vehicles towards rapid industrial development of the nation, eradication of poverty and spreading of education amongst the masses.

Three distinguished speakers amongst IIT Delhi faculty members made presentations in the areas of Biotechnology applications, Geographical Information Systems and application of Vision based Graphics. IIT Delhi faculty members who made the presentations were Prof. S. Chand of the Department of Biochemical Engineering & Biotechnology; Prof. A. K. Gosain of the Department of Civil Engineering & Prof. S. Banerjee of the Department of Computer Science and Engineering.

ORGANISATION

ORGANISATION STRUCTURE

The Management of FITT is vested with a full-time Managing Director. The policy guidelines for operations are provided and overall control is exercised by the FITT Governing Council. The broad organization structure is given in the organizational chart in this section.

GOVERNING COUNCIL

The Governing Council of FITT comprises of representatives from Industry Associations/Industries, nominees of IIT Delhi Senate and Board of Governors. In addition, there is one nominee of the Ministry of Human Resources Development. The Corporate Members of FITT elect one member each from three Categories, large, medium and small sector industries (Category A, B and C) respectively. The Director of IIT Delhi is the *ex-officio* Chairman of the FITT Governing Council, and the Dean, IRD, IIT Delhi is an *ex-officio* member. The Managing Director is the *ex-officio* Member-Secretary.

CONSULTATIVE COMMITTEE

A Consultative Committee consisting of members drawn from industry and faculty has been constituted to aid and advise the Managing Director in implementing the activities of FITT. The Committee also functions as Research Advisory Council of FITT.

STANDING COMMITTEE

Chairman, Governing Council constituted the following Standing Committee of FITT with a view to evolving relationship between IRD, IIT Delhi and FITT, and also to consider and review projects involving IIT Delhi faculty and facilities:

Deputy Director (Faculty)	Chairman
Dean, IRD, IIT Delhi	Member
Managing Director, FITT	Member
Executive Consultant (Tech/Admn.)	Member Secretary

The Standing Committee considers all proposals for major projects involving IIT Delhi faculty and facilities. The Committee also monitors the progress of the projects in hand in which the concerned Project-incharge and Heads of Departments are also invited. The role of the Committee has been very helpful in working out FITT / IRD relationship on all the projects handled by FITT.

The structure of Governing Council, Consultative Committee and Standing Committee is given at the end of this section.

DSIR RECOGNITION OF FITT AS SCIENTIFIC AND INDUSTRIAL RESEARCH ORGANISATION (SIRO)

The Department of Scientific and Industrial Research (DSIR) of the Ministry of Science and Technology conferred recognition to FITT as a Scientific and Industrial Research Organisation (SIRO) initially for a period from 3rd June, 1994 to 31st March 1999. The extension of recognition for a further period of three years up to 31st March, 2002 and now up to 2005 has also been granted. As a SIRO, FITT is eligible for full customs duty exemption for import of capital goods, raw materials and technology know-how that are required for execution of R & D programmes sponsored by industry.

GOVERNING COUNCIL

(As Reconstituted and Announced at the 8th Annual General Meeting held on the 5th September 2002)

CHAIRMAN

Prof. R.S. Sirohi
Director, IIT Delhi
(*Ex-officio*)

MEMBERS

Prof. V. K. Srivastava,
Dean (IRD), IIT Delhi
(*Ex-officio*)

Mr. Shravan Rewari,
MD, Applied Research Int'l,
New Delhi

Prof. R. G. Mendiratta
Dean (Student Welfare),
Netaji Subhash Institute of Technology
New Delhi

Mr. K. S. Mehta,
Partner - Incharge,
M/s. S. S. Kothari & Co

Mr. V. Raghuraman,
Sr. Adviser (Energy)
Confederation of Indian Industry
New Delhi

Dr. A. K. Chakravarti
Adviser,
Department of Info. Tech. (GOI)
New Delhi

Prof. R. S. Agarwal,
Mech. Engg. Deptt., IITD

Ms. Deepanwita Chattopadhyay,
CEO, ICICI Knowledge Park,
Hyderabad

Prof. A. Vardarajan,
Deptt. of Civil Engg., IITD

Prof. Chandra Shakher,
Head, CSC, IIT Delhi

Mr. V. S. Pandey,
Jt. Secretary, Dept. of Education,
Ministry of HRD, New Delhi

Dr. Sujit Banerji
VP - Polymers,
Reliance Industries Ltd.,
Mumbai

Mr. D. Barat,
DGM (Dev.)
M/s. Frick India Ltd.

MEMBER-SECRETARY

Dr. A.K. Sengupta
Managing Director, FITT

CONSULTATIVE COMMITTEE AND RESEARCH ADVISORY COUNCIL

CHAIRMAN

Dr. A.K Sengupta
Managing Director, FITT

MEMBERS

Prof. Surendra Prasad
DD (F), IIT Delhi

Mr. Virendra Kumar
ED (Tech.), BHEL, New Delhi

Prof. B. N. Jain
Dean (AA&IP), IIT Delhi

Mr. Jasmohan Singh
MD, Frick India Ltd

Mr. Surya Kant
Vice President,
Tata Consultancy Services
New Delhi

Prof. S. K. Koul
Head, CARE, IIT Delhi

Dr. Manoj Kumar
Director,
IBM India Research Centre
New Delhi

Prof. H. M. Chawla
Head, Chemistry Deptt.
IIT Delhi

Mr. Paritosh Gupta
DGM, SIDBI, New Delhi

Prof. R. Sagar
Mech. Engg. Deptt.,
IIT Delhi

Prof. G. P. Agarwal
DBEB, IIT Delhi

Mr. Sudarshan Chawla
Secretary
IITD Alumni Association

Mr. R. K. Verma
ED, C-DAC, Noida

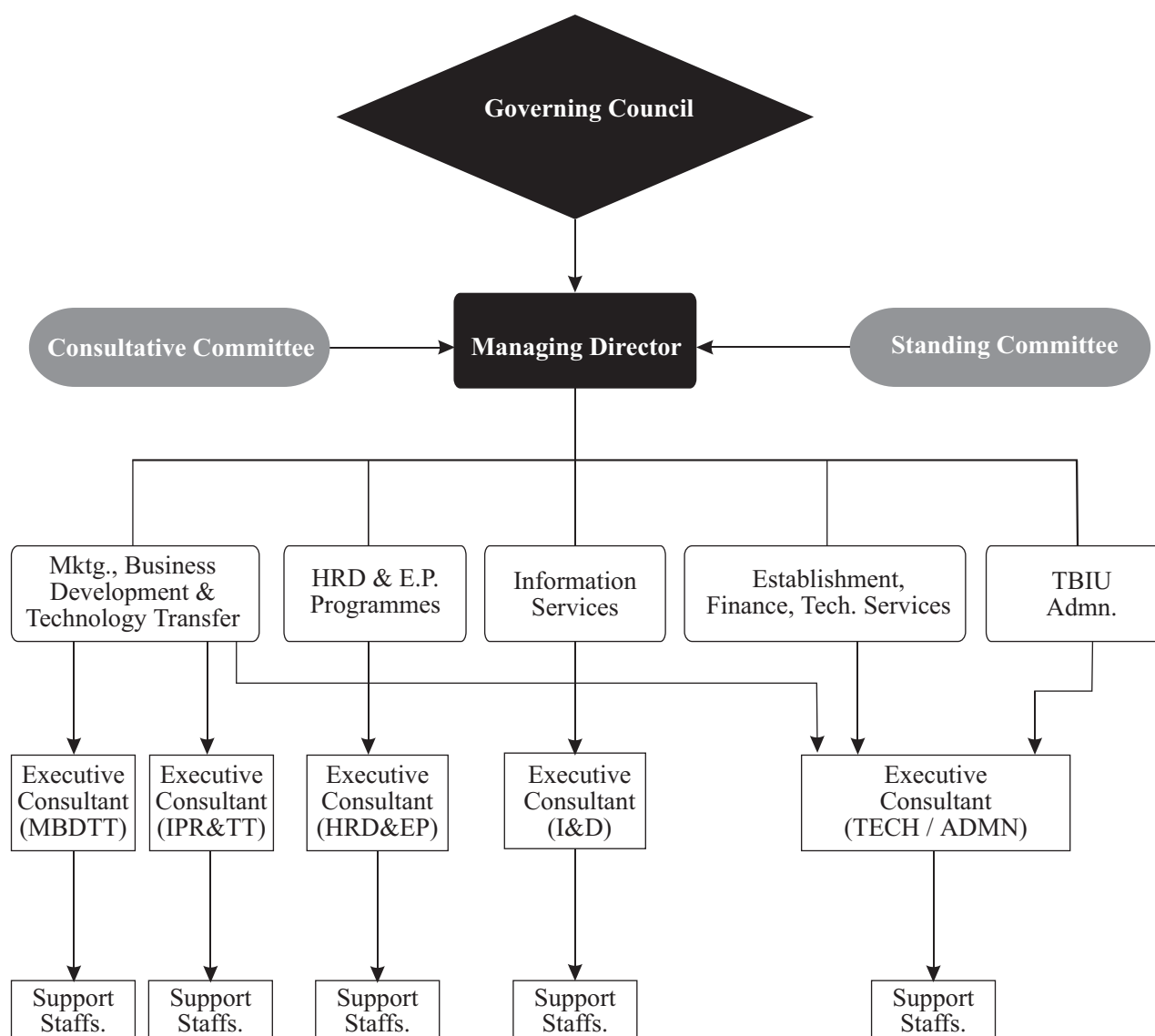
MEMBER - SECRETARY

Mr. K.K. Roy
Exec. Consultant (Tech/Admn), FITT.

INVITEES

Part-time Consultants and Core Staff of FITT

ORGANISATIONAL CHART



KEY PROJECTS AND INITIATIVES

I. INNOVATIONS

Technology Business Incubation Unit at IIT Delhi

FITT had assisted in formulating and establishing the scheme of Technology Business Incubation Unit (TBIU) in the Institute campus near its departments, centers, laboratories and workshops. The objective of the TBIU is primarily to promote partnership with new technology entrepreneurs and start-up companies. As part of the TBIU scheme, limited modular space is provided to new entrepreneurs, first generation start-up companies or technology based organizations for setting up an office or workstation or a prototype laboratory within the Campus, with the intention of

- i) promoting interaction with, and technology/expertise resourcing from, the members of academic staff and research scholars of the Departments and Centres of the Institute, and
- ii) incubating novel technology and business ideas into viable commercial products or services.

The modular space, developed with appropriate infrastructures like electricity and power lines, telephone and networking arrangements without any other furniture as such, are made available to critically screened entrepreneurs, start-up companies at concessional charges. Permitted activities in the TBIU include product development, product innovations, software testing, simulation and prototyping, pilot experimentation, training and similar other technology related work, in which there exist homology with the Institute.

The Board of Governors (BoG) of IIT Delhi approved the Concept Note on establishing the TBIU in IIT Delhi in its meeting in April, 1999. The responsibility of administration and day-to-day management of TBIU was conferred on FITT. An Institute level empowered committee (known as TBIU Board) was formed to oversee the overall functioning of the scheme. The TBIU Board includes the Director, IIT Delhi as Chairman (Ex-officio), besides Deputy Director (Faculty), Deputy Director (Admn., Dean (IRD), and Chairman (Estate Committee) of IIT Delhi as Ex-officio members. Other members includes representatives from industry, financial institutions and MD, FITT as the Member-Secretary (Ex-officio). The members of TBIU Board as on 30.6.2003 is given below:

1. Prof. R.S. Sirohi, Director, IITD	Chairman
2. Prof. Surendra Prasad, DD (F)	Member
3. Prof. D.P. Kothari, DD(A)	Member
4. Prof. V.K. Srivastava, Dean (IRD)	Member
5. Prof. A.K. Nagpal, Chairman (Estate & Works)	Member
6. Dr. Gurpreet Singh, CMD, CDIL, New Delhi	Industry Representative
7. Mr. Atul Khanna, Tooltech Software(I) Pvt. Ltd., Pune	Industry Representative
8. Mr. Girish Mahajan, Chief Manager, ICICI Ltd., Mumbai	Financial Institution Representative
9. Dr. A.K. Sengupta, MD, FITT	Member- Secretary

Another high level committee (known as Standing Screening Committee) has also been set-up for screening of applications for membership of TBIU. The Standing Screening Committee has the following representation:

1. DD (F), IIT Delhi	Chairman (Ex-officio)
2. Dean (IRD), IIT Delhi	Member (Ex-officio)
3. Prof. K.L. Chopra, IIT Delhi	Member
4. Prof. R.K. Arora, IIT Delhi	Member
5. MD, FITT	Convenor
6. Industry Experts	Invitees

A part of the newly constructed extension of Block-I of the Institute has been earmarked for the TBIU complex. An approximate area of 3500 sq.ft. has been developed for the modular office spaces, with 30 seating Conference Room, Meeting Room and a separate Reception and Business Centre with common facilities appropriately equipped.



Several initiatives have been taken by FITT to promote and publicise the TBIU at IIT Delhi. These include articles in newspapers, coverage by television channels and features in trade magazines like Intelligent Investors. FITT had interacted with a number of VC funds / angel investors in an effort to build-up a network to facilitate incubate in successful setting up of commercial ventures.

Incubation proposals initiated by one or more members of faculty/student are considered the most preferred category for incubation residency. As a further measure to encourage the faculty participating in Technology Business Incubation as promoter/owner of the start-up company, the Institute has established appropriate policy guidelines. Towards commercialization of technologies developed through academic pursuits at UG/PG levels, the Institute has widely deliberated upon the FITT originated proposal “*An incubation programme for students / faculty led technology start-up*”. This is a proposal for initiating an incubation programme under which technology development is undertaken by students over a period of 1 to 2 years after they graduate. The development takes place at IIT Delhi under the guidance of their project supervisors and builds upon the research they carry out during their final year project, using existing departments/lab resources but with financial support from IITD/IRD/FITT, particularly in the form of student support and equipment. The end objective of the scheme is enabling the student to start a company or sell/license the technology. The first student and faculty led Technology start-up Incubation proposal was approved by the TBIU Screening Committee and Director, IIT Delhi on July, 2002.

On 31 March, 2003 there were three incubatee projects / companies residing in TBIU with one of the IITD faculty as a mentor / promoter. A brief status of each is given herein:

1. Manufacturing and marketing of RISUG - an Injectable Intravasal Contraceptive for the male:

(Faculty Mentor Inventor: Prof. S.K. Guha, CBME, IIT Delhi)

As part of the TBIU program, the preparation process of RISUG was critically analysed, keeping in view the future upscaling of production. Production facilities at the pilot plant level were designated accordingly and a number of critical subsystems were assembled. A pilot plant meeting GMP norms for sterile medical products was set up in the TBIU of IIT Delhi.

A German scientist/clinician visited the RISUG Unit after being convinced about the systematic production and GMP, applied to the German Drug Regulatory Authority for importing the drug and clinical trials. This German doctor has established contact with an Egyptian multinational drug company. The drug company has desired to take the knowhow and manufacture RISUG in a firm in Germany. The company wants worldwide rights including India.

There is an offer from Canada too which asks for rights for all countries except India. Independent visitors from USA have seen the facility and in a WEBSITE given by Boston Women's Council have considered RISUG as the most promising emerging male contraceptive. (www.malecontraceptives.org)

2. GIS-based Integrated Watershed Management Tool

(Faculty Promoter/Director: Prof. A.K. Gosain, Civil Engg., IIT Delhi)

INRM Consultants Pvt. Ltd., is a startup company, incorporated by faculty and alumnus of IIT Delhi, under the Technology Business Incubation plan of IIT Delhi. INRM provides Integrated Natural Resource Management Solutions, which are the cutting edge technology and therefore, highly scientific to provide the area specific solutions to very complex problems.

The company is engaged in making these solutions highly user friendly and interactive by bringing in the GIS interface. Founded in 2001, the R & D unit of the company is located in the TBIU Complex of IIT Delhi.

The business of the company is spread over the following major segments:

- Product development
- Technical services
- Training material development

The product development for tailor made solutions involve GIS, remote sensing, GPS technologies and natural resource modeling. The company also indulges in information generation on various natural resource entities through indirect assessment using modeling.



Technical services related to:

- Modeling and natural resource management
- Database design and management, data processing and management of spatial, remotely sensed and GPS data
- Web based solutions for integrated natural resource management
- Highly technical and value added information

Training material development for Web-based and CDROMs for GIS applications and other areas related to GIS is taken up on client's request. Specialised tailor made training programs are also developed and conducted.

- Some of the areas in which INRM has expertise are:
- Integrated watershed management
- Hydrological & ground water modeling
- Environmental Impact Assessment
- Rainwater harvesting
- Agriculture forecasting etc.

3. KritiKal Solutions Pvt. Ltd.

A start-up company in the name of M/s KritiKal Solutions Pvt. Ltd. (KSPL) has been incorporated under the Indian Companies Act, 1956. The start-up involves 5 faculty members and 7 graduate students of the Computer Science & Engg. Deptt. of IITD amongst its Board of Directors. KSPL is involved in the development of products and technologies in areas of Embedded Systems, Real-Time Applications, Security Systems, Computer Vision and Network Emulator. The incubation programme had commenced in September 2002. KSPL has been provided with initial seed money to sustain them through the development phase along with infrastructure support in the form of equipment / accessories to spearhead the development. In addition to this, FITT is providing the techno-managerial support / assistance in the initial stage to KSPL to aid the incubation programme.

4. R & D on Insulated Lightweight Prefabricated Building Structures for Thermal Comfort and Energy Conservation.

(*Faculty Advisor: Prof. N.K. Bansal, CES, IIT Delhi*)

The Technology Business Incubation has been undertaken by the **R&D division of M/s. Sintex Ltd.** Products proposed for development / based on technologies in the Institute includes fabrication of building elements which can reduce heating / cooling. The following elements are being investigated

- Energy Efficient Windows
- Insulated Walling Elements
- Insulated Slabs
- Complete Insulated Prefabricated Building Structure

With the help of powerful simulation tools that are now available with the organization (Sintex ESCO), it intends to undertake the calculation of air-conditioning load and operational energy requirements. In the same fashion the Incubation Unit wants to study and work out the requirements for lighting and water heating. The incubatee has since graduated out of the incubator on 19th February, 2003.

II. RESEARCH/TECHNOLOGY DEVELOPMENT PROJECTS:

1. Management of Upper Water Catchment, especially in Dry Forests in India with Low Base Flows: Forestry and Low Flows, Spatial Modelling & open GIS Dissemination of the Science Perception.

(*P.I.: Prof. A.K. Gosain, Deptt. of Civil Engineering*)

The project focuses on improving scientific understanding of forests/flows interaction in a arid zone context, developing decision making tools and limiting this improved understanding to policy through the development of GIS dissemination tools and direct interaction with institution and policy makers.

The project contributes to local understanding of natural resources management and scientific knowledge, aiding effective management decision in the study area by stakeholders and funding organisation. The participating



institutions are: 1) Centre of Land Use and Water Resources Research, University of Newcastle, U.K., 2) (IIT Delhi / FITT, 3) Regional Engineering College, Hamirpur, H.P. 4) Regional Research Laboratory, Bhopal, M.P. and 5) Winrock International India, New Delhi. The project is financed by DfID, U.K.

2. Research partnership with M/s DCM Shriram Consolidated Ltd.

(P.I.: Prof. H.M. Chawla, Deptt. of Chemistry)

Under a contractual agreement, FITT is facilitating the development of new technology, speciality chemicals for new markets and new process / application for the client with the scientific and technical expertise of Prof. H.M. Chawla of the Deptt. of Chemistry. As a spin off to such interaction, a number of deliverable specific projects could be implemented in the institute as well as in Research Centre of the client in Gurgaon.

3. Media & Process Optimization for Fermentation of Beauveria.

(P.I.: Dr. Vikram Sahai, Deptt. of Biochemical Engineering and Biotechnology)

The project envisages complimentary developmental activities by the Institute and the client (M/s Biotech International Ltd.). Whereas the development takes place in the Institute for optimum media and fermentor operating condition for the growth of Beauveria and ways and means of increasing product shelf life, the client shall put it to the field trials on different crops under various geo-climate conditions with data feedback to the Institute for further refining/research and development in subsequent trial process. 60 trial runs are envisaged to stabilize the parameter.

4. Development of a Process for the Synthesis and evaluation of a new aleuritic acid based active ingredient for deodorants(Phase-I)

(P.I.: Prof. H.M. Chawla, Deptt. of Chemistry)

The development envisages the establishment of a laboratory process for the synthesis of a potential deodorant chemical from Aleuritic Acid. The technology thus developed will be transferred to M/s Shellac Export Promotion Council (the client) under the agreed technology development-cum-transfer project.

5. Evaluation of Performance Properties of Semi permeable membranes based on PP Fibre.

(P.I.: Dr. A.K. Ghosh, Centre for Polymer Science and Engineering)

The project aims towards characterization of semi permeable hollow fibre membranes developed using polypropylene fibre. This involves collaboration work between AMT, USA and IIT Delhi and focus mainly on the characterization and structure-property correlation of the semi permeable membrane. The fabrication of the membranes are carried out at AMT.

III. TECHNOLOGY TRANSFERS: ILLUSTRATIVE PROFILES

1) Low-Molecular Weight (upto 400 Mol. Wt.) Organic Compound using liquid carbon dioxide extraction process

(Principal Inventor: Dr. S.N. Naik, CRDT)

This technology licensed to M/s. Aromatix Flora Pvt. Limited, pertains to know how manufacture of low molecular weight (upto 400 mol.wt.) organic compounds by using liquid carbon dioxide extraction process comprising of:

(i) process knowhow manual providing information in respect of the manufacture of the article applicable to Hop flowers & training and demonstration of process, quality control parameters and testing of Hop extract. The project will be completed within a period of 18 months.

2) Pilling Tester on Digital Image Processing

(Principal Inventor: Prof. P.K. Behra, Deptt. of Textile Technology)

This technology licensed to M/s. Innovative Engitech (P) Ltd., pertains to development of an objective evaluation system of piling, using image processing techniques. A continuous scene of piled fabric sample is converted to Digital Image and stored in a memory by the image acquisition element. The gray image is converted to frequency spectrum by a transformation technique. The filtered transformed spectrum is then reconstructed and converted to binary by thresholding and thus pills are separated from the original image and used for estimation of a detailed geometrical analysis. Based on results obtained from image processing a suitable grade is formulated to compare with the images

taken from standard charts in the similar manner.

IV. SEMINAR AND HRD PROGRAMS: PROFILES

Indo-British Workshop on Collaborative Research in Telecommunications

Indo-British Workshop on Collaborative Research in Telecommunications was held at IIT Delhi on September 23rd, 24th and 25, 2002 under the aegis of FITT with Prof. Surendra Prasad, Electrical Engineering Department as the coordinator. British Council invited and organized the second Telecom Mission to explore opportunities for joint academic research as well as Indo-UK partnership in training and education in Telecom area. The mission had eight telecom experts from various leading British universities and Corporates. DST sponsored the workshop at IIT Delhi to bring together the visiting UK experts and various Indian academics from IITs, National Institutes of Technologies and telecom companies in India, in the workshop mode.

The objective of this workshop was to deliberate on issues such as current reach and limited access of telecom network in India and R & D required to improve it, drawing upon British experience. This workshop was to determine the areas where India and UK could identify, plan and execute R & D projects of mutual interest, and provide appropriate training in telecom.

Computational Neuroscience

A course on Computational Neuroscience was held at IIT Delhi during 14th-24th May 2002, sponsored by National Brain Research Centre, Gurgaon, Haryana. The course was designed to introduce researchers to the field of Computational Neuroscience and to the nature of computations performed by brain and algorithmic implementation of such computations. It was coordinated by Dr. Basabi Bhaumik of Electrical Engineering Deptt., IIT Delhi and was attended by researchers from universities all over the country.

Fibre Optics and Applications

A course on Fibre Optics & Applications was held for the fifth consecutive year for professionals from ONGC, during 3-14 February 2003. From ONGC offices in various parts of India 20 professionals were deputed for this course. The course covering fundamentals, components and applications of Fibre Optics has always received very good feedback and appreciation from the participants. This included guest-lectures from industry like C-DOT and a field visit other than classroom-training.

Symposium on “Open Source Software initiative and Business Opportunities”

A symposium on “Open Source Software initiative and Business Opportunities” was organized by FITT, on 20th February 2003 at TBIU Conference room at IIT Delhi. Mr. Robert Adkins (President) and Ms. Alolita Sharma (CEO) of cWare Inc., California, discussed new thinking in business models for global software products and technologies. Limitations of traditional software business approaches urgently require new market paradigms. Free and Open Source software and technologies are utilized for business.

Other than the above, there were HRD programs held in various other areas like Mixed Signal Design Issues & Technology and Design Issues in ADC and DAC for National Semiconductors Ltd., Bangalore, Use of SWAT Model in Basin Level planning for UP Water Sector Restructuring Project, Lucknow, Mechatronics Technologies for Semtel Color Ltd., Ghaziabad, and Coir Geotextile Testing for Central Coir Research Institute Coir Board, Kerala.

V. NATIONAL COLLECTION CENTRE FOR CD ROMS AT FITT, IIT DELHI

The “National Centre for Publication on CD-ROM” (Published in India and on India) was set up by the National Information Systems for Science and Technology (NISSAT), Department of Scientific and Industrial Research (DSIR), Ministry of Science and Technology, Government of India at FITT, IIT Delhi to build up a National Repository of CD-ROMs and to preserve the national heritage.

The objective of the Centre is to procure and compile the bibliography of all CD-ROMs published/developed in India and on India (excluding games, software, music and other entertainment products) and also act as a platform to bridge the gap between Indian CD-ROM Developers/Publishers/CD-ROM users and CD-ROM intermediaries. The CD-ROM center also offers facilities like reference and referral services from India and other available CD-ROM products, systematic compiling of CD-ROM holdings in different libraries and information centers in India in the form of Union



Catalogue, and promotion of Indian CD-ROM products amongst potential clientele.

The Union catalogue of CD-ROMs is published yearly and mailed to all the respondents free of cost. Union Catalogue forms can be downloaded from <http://www.indiancdproducts.org>.

VI. FITT AWARDS FOR BEST INDUSTRY RELEVANT PH. D. AND M. TECH./ M. S. (R) PROJECTS

With effect from the academic session of 2002-03, Foundation for Innovation and Technology Transfer (FITT) has instituted two awards, one each for Ph.D. and M.Tech. / M.S. (R) projects adjudged as the best Industry Relevant Projects. The award carries an amount of Rs. 60,000/- for Ph.D. & Rs. 40,000/- for M. Tech/M.S. (R) Projects. The award money will be shared 50:50 between the concerned faculty supervisor (s) and student (s) for both Ph.D. and M.Tech./ M.S. (Research) work. Accordingly, the under mentioned students were selected for the 2002-03 FITT Awards as follow:

Mr. Maung Maung Mya- Ph.D. Research Scholar in the Centre for Bio-Medical Engineering. Project titled : “ An Immunological Study of Plasmodium Falciparum Malaria Field Conditions”. The Award amount is Rs. 30,000/-

Mr. Kapil Chandra Agarwal- Student of M.Tech. Programme in Solid State Materials in the Physics Department. Project titled: “Spectroscopic Analysis of Low-Dimensional Structures”. The Award amount is Rs. 20,000/-

Further, the proportionate share of award money payable to the Faculty Supervisor (s) mentioned below are indicated against their names:

1. Dr. R. K. Saxena

Associate Professor, Centre for Biomedical Engineering, India Institute of Technology Delhi & All India Institute of Medical Sciences, New Delhi. The Award amount is Rs. 15000/-.

Dr. Arati Roy

Deputy Director, Malaria Research Centre, Delhi. The Award amount is Rs. 15000/-.

2. Prof. D.K. Pandya

Department of Physics, Indian Institute of Technology Delhi. The Award amount is Rs. 5000/-.

Prof. S.C. Kashyap

Department of Physics, Indian Institute of Technology Delhi. The Award amount is Rs. 5000/-

Prof. C.F. Klingshirn

Institute of Applied Physics, Universitat Karlsruhe (TH), Germany. The Award amount is Rs. 5000/-

Dr. M. Hetterich

Institute of Applied Physics, Universitat Karlsruhe (TH), Germany. The Award amount is Rs. 5,000/-

The above awards were conferred on the students concerned at the Convocation 2003.

VII. SETTING UP OF LABORATORIES WITH SPECIALISED EQUIPMENTS ETC. IN SPECIFIED TECHNOLOGY AREAS

Out of the operational surplus over the years, FITT had kept aside certain amount for augmenting the laboratory resources in the Institute. Proposals invited from the faculty members were appraised by a duly constituted sub-committee in the Institute and the following laboratories were selected for fund support during the year 2002-03:

S. No.	Laboratory Name	Faculty/Faculty Group	FITT Support recommended by the Committee
01.	FITT Laboratory in Medical Textile	Dr. Bhubanesh Gupta, DTT	Rs. 18 lakhs
02.	Specialised Laboratory in DBEB	Prof. (Ms.) Saroj Mishra, DBEB	Rs. 20 lakhs
03.	FITT Advanced MEMSCAD Laboratory	Prof. S.K. Koul, CARE	Rs. 8 lakhs
04.	FITT Laboratory for Research in Pharmaceutical Biotechnology	Prof. V.S. Bisaria, DBEB	Rs. 18 lakhs

It is expected that the laboratory/ augmentation of the equipment/facilities would boost up research activities in emerging technology areas of direct industry relevance which would facilitate technology development and technology transfer in the long run.

VIII. CORPORATE MEMBERSHIP SCHEME OF FITT

An information support service unit had been set up in FITT since its inception in 1992 in order to keep abreast the industry with the technological developments, research activities and faculty and expertise of IIT Delhi and also to help IITD faculty to access details on industries as well as technology development information worldwide. In this endeavour a project has been developed at FITT known as Corporate Membership Scheme of FITT. The membership of the scheme is open to industry, industry associations, R&D organizations and financial institutions that would like to support the concept of Institute-Industry interaction.

The project has valued clients like Reliance, National Thermal Power Corporation, Bharat Heavy Electricals Ltd, and Munjal Showa Ltd.

The Corporate Members have access to all the International CD-ROMs and 700 on-line electronic journals subscribed by IITD Central Library as well as CD-ROMs available at FITT. They can borrow Library books as per the rules of the Central Library. All these services can be availed over phone/fax or e-mail. There is also facility of linking the Corporate Members' homepage to FITT website.

Other services provided to the Corporate Members include providing training programmes that can be arranged according to the specific needs of the Corporate client.

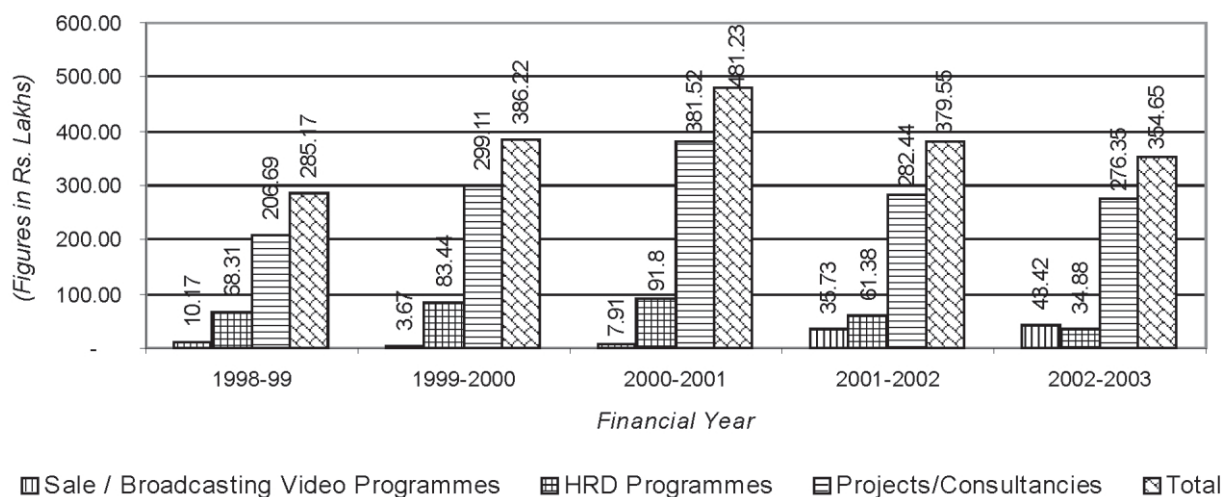
FINANCIAL HIGHLIGHTS

(Figures in Lakhs of Rupees)

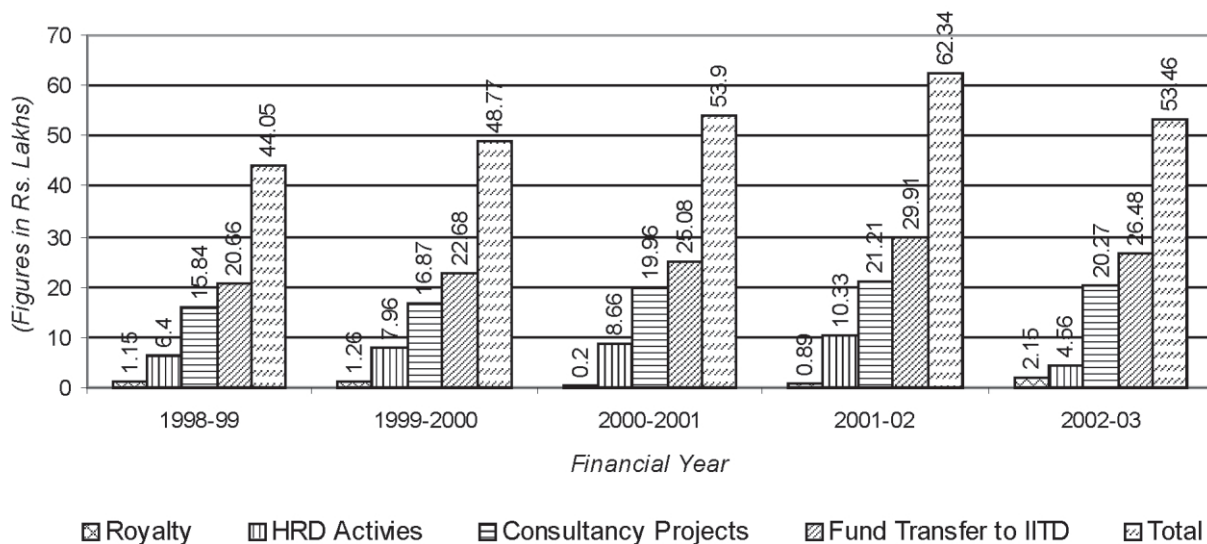
	1998-1999	1999-2000	2000-2001	2001-2002	2002-2003
Investments					
Company Deposits and Bank Deposits	510.00	640.14	778.59	905.00	775.00
Earnings					
(i) Interest	49.79	62.38	70.97	82.70	69.70
(ii) Projects/Other Activities	23.55	26.09	28.82	32.43	26.98
(iii) Corporate Membership Fees	1.65	2.87	*	*	2.59
Expenditures					
(i) Capital	9.22	1.63	17.76	1.39	2.15
(ii) Operational/Promotional/Administrative	48.64	46.60	45.29	50.95	65.73
(iii) Rent for Office Premises (Payable to IIT Delhi)	7.96	9.00	8.92	9.28	8.09
Fund Transfer to IITD Delhi (Project Activities)	20.66	22.68	25.08	29.91	26.48
Assets Generated for IITD Delhi (Out of Project Activities Administered by FITT)	28.59	29.08	21.29	24.06	93.70
Value of Projects Contracted/ Other Activities at FITT	285.17	386.22	481.23	379.55	354.65

* Corporate Membership fees were accounted against N-WISE Project.
In 2000-2001 the total fees received were Rs. 2.46 lakhs and in 2001-2002 Rs. 3.10 lakhs.

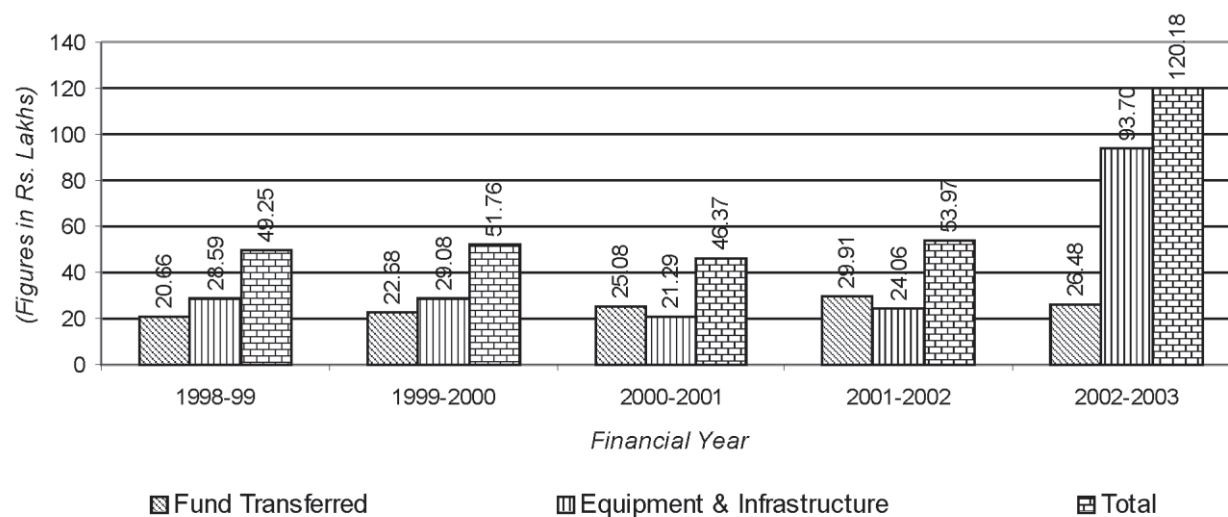
VALUE OF MAJOR ACTIVITIES UNDERTAKEN BY FITT



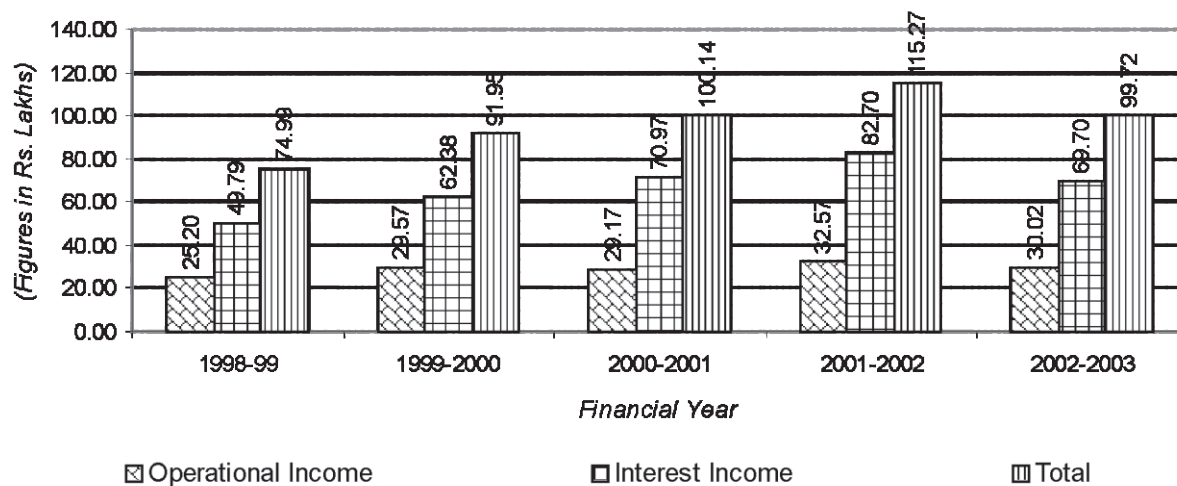
RESOURCE GENERATION FOR FITT & IIT



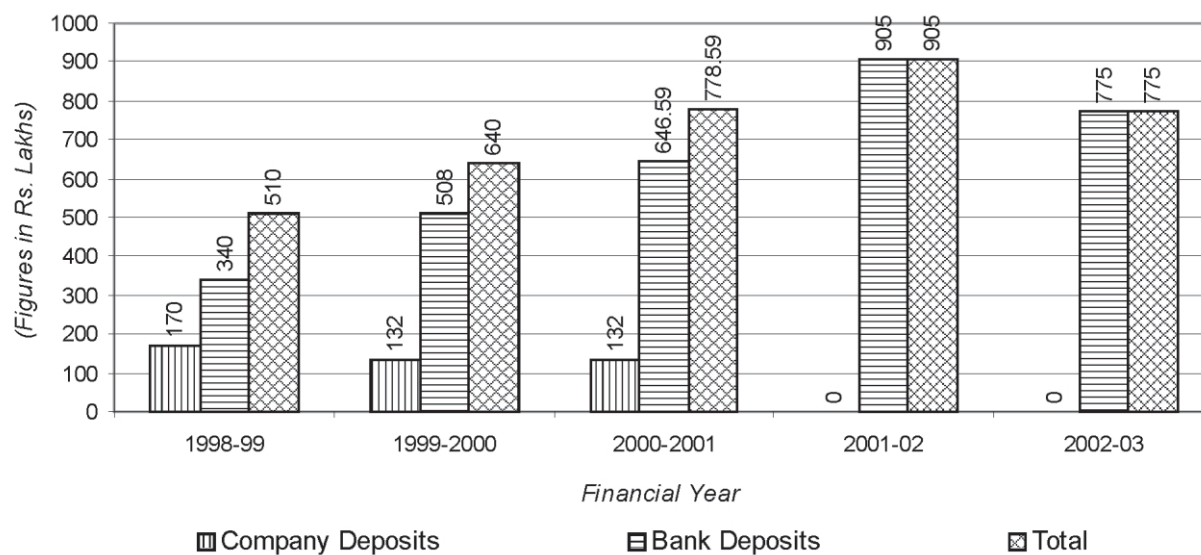
ASSETS GENERATED FOR IIT DELHI



INCOME PROFILE OF FITT



FUND INVESTMENT PROFILE



**LIST OF IPR APPLICATION PROPOSALS APPROVED BY IPR STANDING COMMITTEE
AND FILED DURING THE YEAR 2002-2003**

S.No.	Title of the Invention	P.Inventor/ Deptt./Centre	Date of Approval IPRSC / Date of filing	Status as on 11-6-03
1.	Development of a New Alginate-based Wound Dressing Material	Dr. Manjeet Jassal, DTT	22-4-02 11-7-02	Filed
2.	Foldable Electric Vehicle	Mr. Abhinandan Ashok Dhole, Student, IDDC	22-4-02 9-4-03	Filed
3.	Block Phase Precoding for Blind Multiuser Detection of BPSK/DS-CDMA Signals	Prof. Surendra Prasad, DEE	22-4-02 23-5-02	Filed
4.	'TORSIOMETER'	Prof. P.K. Banerjee, DTT	22-4-02 24-7-02	Filed
5.	'A process for preparation of a hydro-gel'	Dr. Veena Koul, CBME	24-6-02 24-10-02	Filed
6.	'A novel hydro-gel'	Prof. Veena Koul CBME	24-6-02 24-10-02	Filed
7.	'Intrinsically Gain Flattened Erbium Doped Fiber Amplifier (EDFA)'	Dr. K. Thyagarajan, Physics	24-6-02 12-9-02	Filed(P)
8.	'Machine vision system to detect contaminants from cotton'	Prof. Chander Sekhar, IDDC	19-9-02 12-9-02	Filed(P)
9.	'Vibration measurement/monitoring system using digital speckle pattern interferometry'	Prof. Chander Sekhar, IDDC	19-9-02 12-9-02	Filed
10.	Fabrication of recessed micromechanical structures on (100) silicon wafers	Mr. Prem Pal, CARE	12-9-02 13-1-03	Filed
11.	A design for low cost front-to-back alignment system using precision metal sheet mask and a mechanical fixture	Dr. Sudhir Chandra, CARE	12-9-02 28-4-03	
12.	Development of energetic binders (Azido polymers) using novel dipolarphiles	Dr. I.K. Varma CPSE	12-9-02 27-5-03	
13.	A novel energetic binder	Dr. I.K. Varma, CPSE	12-9-02 27-5-03	
14.	Digital image processing based pilling tester	Prof. B.K. Bahera DTT	12-9-02 21-4-03	
15.	Linear gradient heater for continuous drawing of PP filaments	Prof. B.L. Deopura DTT	23-12-02	Filed(P)

S.No.	Title of the Invention	P.Inventor/ Deptt./Centre	Date of Approval IPRSC / Date of filing	Status as on 11-6-03
16.	Process for drawing PP filaments using Gradient heating	Prof. B.L. Deopura DTT	23-12-02	Filed(P)
17.	Design of a broadband dispersion compensation fibre for DWDM transmission	Prof. B.P. Pal Physics	23-12-02 9-4-03	Filed
18.	A novel Rustgaurd and process for making the same	Prof. A.K. Ghosh CPSE	23-12-02 31-3-03	Filed
19.	A topcoat for a Rustgaurd	Prof. A.K. Ghosh CPSE	23-12-02 31-3-03	Filed
20.	A novel neem based biopesticide	Mr. Aditya Jhulka Student, DBEB	26-2-03 9-4-03	Filed
21.	Spinning of PLLA by dry jet wet spinning method	Prof. Bhuvanesh Gupta, DTT	26-2-03 7-4-03	Filed

**LIST OF IPR APPLICATION PROPOSALS APPROVED BY IPR STANDING COMMITTEE
AND IN THE PROCESS OF FILING**

S. No.	Title of the Invention	P.Inventor/ Deptt./Centre	Date of Approval IPRSC / Date of filing	Status as on 26-3-03
1.	'A Machine/System for Horizontal Directional Drilling'	Prof. P.M.V. Rao DME	19-8-02	Approved
2.	Fruit depulper machine	Prof. S.N. Naik CRDT	10-10-02	Approved
3.	Error Correction system using trellis code based on chaos functions	Dr. Ranjan Bose DEE	23-12-02	Approved

TECHNOLOGIES LICENSED DURING 2002-03

S. No	Title	PI	Deptt.	Client
1	Know how Transfer of fiber optics educational kit	Prof. A. K. Ghatak	Physics	M/s Bipin Behari Dev & Co.
2	Low Molecular Weight Organic Compound using Liquid Carbon Dioxide	Dr. S. N. Naik	RDAT	M/s Aromatrix Flora Pvt. Ltd., New Delhi
3	Pilling Tester based on Digital Image Processing	Prof. P. K. Behera	Text Tech.	M/s Innovative Engitech (P) Ltd., New Delhi

DEVELOPMENT PROJECTS DURING THE FINANCIAL YEAR 2002-2003

S. No	Title	PI	Deptt.	Client
A. PROJECTS LICENSED WITH TBIU				
1	Assessment of Vulnerability and adaptation for Water Sector	A. K. Gosain	Civil Engg.	Winrock International India, New Delhi
2	GIS Based Planning and Management System for Coffee Plantations	A. K. Gosain	Civil Engg.	Coffee Board, Bangalore
3	Technology Development of a Network Product for Xerox Modicorp Ltd.	S . Banerjee	CES	M/s. Xerox Modicorp Ltd., Rampur, U.P.
4.	Implementation of GIS activities for client	A. K. Gosain	Civil Engg.	CIMMYT, India
B. PROJECTS CONTRACTED WITH CORPORATE MEMBERS				
1	Certification of test rig & performance analysis of screw compressor	S. R. Kale	Civil Engg.	CIMMYT, India
C. PROJECTS INVOLVING FOREIGN COLLABORATION				
1	Air Quality Pilot Project in New Delhi	Geetam Tiwari	TRIPP	CE-CERT University of California, Riverside
2	Considerations for light commercial vehicles in 2010-2015 in India	Geetam Tiwari	TRIPP	The Gie Renault Recherche Innovation, France
3	International Project "Management of upper water catchments, especially in dry forests in India with low base flows, forestry and low flows, spatial modelling & open GIS dissemination of the science perception.	A. K. Gosain	Civil Engg	University of Newcastle, UK, IITDelhi/FITT, REC, Hamirpur, REC, Bhopal & Winrock India International, Delhi
4	Report on Intellectual Property Examination and Exploration of New Concepts	L. K . Das	IDDC	M/s. U.S.F. Filtration Ltd., Australia
5	Modelling of Airbags	Anoop Chawla	TRIPP	JARI
6	Evaluation & Performance of Hollow Fibre Membrane based PP	A. K . Ghosh	CPSE	Applied Membrane Technology Inc., USA

D. ONGOING PROJECTS CONTRACTED EARLIER WITH PROGRESS IN PHASES

S. No	Title	PI	Deptt.	Client
1	Verification of Concrete Mix Design: Phase-I	Alok Madan	Civil Engg.	Larsen & Toubro Ltd., New Delhi
2	Quality Checking of the on-going development works at I.A. Tronica City, Lone, Ghaziabad (Phase-II)	G. V. Rao	Civil Engg.	UPSIDC, Ghaziabad
3.	Quality Checking of the on-going development works at I.A. Tronica City, Lone, Ghaziabad (Phase-V)	G. V. Rao	Civil Engg.	UPSIDC, Ghaziabad
4.	Testing of Cement Concrete Hollow Blocks (Phase-IV) for DDA, Dwarka Project	G. V. Rao	Civil Engg.	DDA
5	Quality Checking of the on-going development works at I.A. Tronica City, Ghaziabad (Phase-VI)	G . V . Rao	Civil Engg.	UPSIDC, Ghaziabad
6	Issues related to Fiber Transmission for High Capacity Optical fiber Systems (Phase IV)	K. Thyagarajan	Physics	M/s. Tejas Network India Pvt. Ltd., Bangalore.
7	Advice on construction of 526 SFS Houses using Hollow Block Masonary in Pocket-1, Sector-15, Rohini, Delhi (Phase-III)	G . V . Rao	Civil Engg.	DDA
8	Chief Technical Advisor - Optical Components Development Programme, Phase-II	B . P . Pal	Physics	M/s Renka (I) Pvt. Ltd., Gautam Buddha Nagar
9	Retainer Consultancy on Interaction with chlor-alkali plants at Kota and Jhagadia” for M/s. DCM Shriram Consolidated Ltd.	H. M. Chawla	Chemistry	M/s DSCL, New Delhi

**E. NEW PROJECTS GENERALLY ADDRESSING TECHNOLOGY
DEVELOPMENT/TECHNOLOGY TRANSFER**

S. No	Title	PI	Deptt.	Client
1	Development of composites containing polyaniline to explore its tribo-potential	Jayashree Bijwe	ITMMEC	Gargi College, New Delhi
2	Exploring the potential of newly developed fire resistant hydraulic fluids as lubricants	Jayashree Bijwe	ITMMEC	M/s. Lubrichem, New Delhi
3.	Environmental Upgradation of NSG Garrison at Manesar, Dist. Gurgaon	Rema Devi	Civil Engg.	N.S.G., CGO Complex, New Delhi
4.	Tribological investigation of carbographite materials	Om Prakash	ITMMEC	D.M.S.R.D.E., Kanpur
5	Optimization for efficient computing resource allocation	Sandeep Juneja	Mech. Engg.	IBM
6	Media & Process optimization for fermentation of beauveria	Vikram Sahai	DBEB	Biotech International
7	Signal analysis training, research and content development	Ranjan Bose	Elect Engg.	M/s Sebiz Infotech
8	Technology Enrichment & Transfer : IT facilitated quality management for SMEs	Subhash Wadhwa	Mech Engg.	M/s 3SEI
9	Design & Fabrication of electronic ballasts for 400 watts HID (High Intensity Discharge) Lamp	A . K . Mukherjee	CES	AMS
10	Noise Reduction on 12 Cylinder Engine Locomotives	Naresh Tandon	ITMMEC	RDSO, Lucknow
11	High Density cell fermentation & stability studies on bio fertilizers	V . S . Bisaria	DBEB	International Panacea Ltd., New Delhi

S. No	Title	PI	Deptt.	Client
12	Technical Guidance and Development of Minolta-BI	Santanu Chaudhury	Elect Engg.	Network Programs (I) Ltd., Noida
13	Surgical Safety Scaplet	L . K . Das	IDDC	Jai Surgical Ltd.
14	Studies on erosive wear resistance of hard facing alloys	J . Bijwe	ITMMEC	NTPC, Noida
15	Devt. of software and hardware for LNA, VCO & DRO (Phase-II)	S . K . Koul	CARE	DRDO, Dehradun
16	Development and Production of Therapeutic Protein	J . K . Deb	DBEB	M/s. Glenmark Laboratories Pvt. Ltd.
17	Devt. of a process for the synthesis and evaluation of a new aleuritic acid based active ingredient for deodorants (Phase-I)	H . M . Chawla	Chemistry	M/s Shellac Export Promotion Council, Kolkata
18	Molecular Characterization of polymeric emulsions	Alok Ray	CBME	M/s Harayana Leather Chem Ltd.

HRD ACTIVITIES UNDERTAKEN DURING 2002-2003

S. No	Title	PI/Deptt.	Client
1	Course on Computational Neuroscience	Prof. B. Bhaumik, EE	National Brain Research Centre, Gurgaon
2	Training on the Usage of Computers to Department of Secondary and Higher Education & Department of Elementary Education, Ministry of HRD	Prof. S.K. Koul, Head, CSC	Department of Secondary and Higher Education, MHRD
3	Training on DSP for Motorola	Prof. G. S. Visweswaran, EE	Motorola, Gurgaon
4	Course on Maintenance Tribology and Failure Analysis for NTPC, Unchahar	Dr. Om Prakash, ITMMEC	NTPC, Unchahar
5	Into-British Workshop on Telecommunication	Prof. S. Prasad, EE	DST, New Delhi
6	Exposure and Upgradation of Automation and Mechatronics Technologies	Dr. I. N. K. Kar, EE Dr. S. K. Saha, ME	Samtel Colour Limited, Ghaziabad
7	Mixed Singal Design Issues & Technology	Prof. D. Nagchoudhuri, EE	National Semiconductors, Bangalore
8	Use of SWAT Model in Basin Level Planning	Prof. A. K. Gosain, Civil	UP Water Sector Restructuring Project, Lucknow
9	Internatioanl Course on Transportation Planning & Road Safety	Dr. Geetam Tiwari, TRIPP	INRETS, France.
10	Training Programme on Fibre Optics and for ONGC	Prof. A. K. Ghatak, Physics, Prof. B. P. Pal, Physics	ONGC Dehradun.
11	Training Programme in Coir Geotextile Testing	Prof. G. V. Rao, Civil	RDTE Central Coir Research Institute , Kerala
12	Design Issues in ADC & DAC	Prof. D. Nagchoudhuri, EE	National Semiconductors, Bangalore

CORPORATE MEMBERS DURING APRIL 1 2002 TO MARCH 31 2003

CATEGORY - A

<u>S. No</u>	<u>Name of the Organization</u>	<u>Areas of Interest</u>
1	Reliance Industries Ltd. Corporate Data Bank Swastik Mill Compound VN Purav Marg, Chembur Mumbai 400 071	Petrochemicals (polymers, fibres, chemicals)
2	DCM Shriram Consolidated 5 th Floor, Kanchenjunga #18 Barakhamba Road New Delhi 110 001	Chemicals, Plastics, fertilizers, natural products, environment, energy, IT, agriculture
3	BHEL Corporate Research & Development Division Vikasnagar Hyderabad 500 093	Electric Power and Generation, Transmission and Distribution Equipment
4	Xerox Modicorp Ltd. 19th flr, DLF square Jacaranda Marg, M Block DLF City, Ph-II Gurgaon - 122 002, Haryana	Copies, Consumables, parts
5	Larsen & Toubro Limited ECC Division Library & Documentation Centre P.B.No. 979 Mount Poonamallee Road Manapakkam, Chennai 600 089	Construction
6	Tata Infotech Research Lab Ground Floor, Library Building IIT Campus, New Delhi-110016	IT, System, Integration, Software Products, Manufacturing, Education
7	Snowcem India Ltd. Killick House, Killick Estate Baji Pasalkar Marg Chandivli Mumbai-400072	Manufacturers of cement paints and allied products
8	Pidilite Industries Limited Ramakrishna Road Off M. Vasanji Road Andheri East Mumbai-400 059	Synthetic Resins & Adhesives, Art Material, Surfactants Pigments Dyestuff and Speciality

<u>S. No</u>	<u>Name of the Organization</u>	<u>Areas of Interest</u>
9	Punjab Tractors Ltd., Swaraj R&D Complex A-29-E, Industrial Area Phase VII S.A.S.Nagar (Near Chandigarh) PIN- 160 055	Manufacturer of Agricultural Tractors, Harvester Combines, Forklift, Trucks, Automotive Castings and Agricultural Machinery/Equipment
10	Jubilant Organosys Ltd., Plot No. 1A, Sector 16A, Institutional Area, Noida Distt. Gautam Budhnagar U.P. 201301	Vamicol, Wood paints, Adhesives
11	Sterlite Optical Technologies Ltd. E-2, M.I.D.C., Waluj Aurangabad-431136, Maharashtra	Optical Fiber Technology, Optical Communication Networking, Materials, Glass Technology
12	ALSTOM Group (ALSTOM Power India Ltd.) Chandiwalla Estate, Maa Anand Mai Ashram Marg, Kalkaji, New Delhi-110019	Engineering Materials, Noise Analysis, Vibration, Environment, Electrical Engineering, Mechanical Engineering, Civil Engineering, Instrumentation & Control Information Technology, Training
13	Indian Aluminium Company Ltd. 15 Floor, Air India Building Nariman Point Mumbai-400021	Aluminium Alloy, Metallurgy, joining, finishing and forming of Aluminium Alloys, applications, etc.
14	National Hydroelectric Power Corporation Ltd. (NHPC) NHPC Office Complex Sector-33, Faridabad Haryana-121003	Hydroelectric development, power generation
15	FIBCOM India Ltd. 77 A, IFFCO Road Sector-18, Gurgaon-122015 Tel-2809000, 2347030-31	Electronics/Electrical/ Computer Science Mechanical/Chemical
16	Nestle India Ltd. Nestle House, Jacaranda Marg DLF City Phase II Gurgaon 122002	Infant Formulae, Weaning Cereals Milk Powders, Culinary Products Health Beverages, Water Instant Coffees/Tea
17	National Thermal Power Corporation Ltd. (NTPC) (Environment Engineering Deptt.) 2nd Floor, EOC A-8A, Sector-24 NOIDA-201301	Energy & Environment Waste Management Non-conventional energy

<u>S. No</u>	<u>Name of the Organization</u>	<u>Areas of Interest</u>
18	TVS Motor Company Ltd. Knowledge Centre Post Box No. 4, Harita, Hosur Tamil Nadu-635109	Two Wheeler Manufacturing IC Engines Design, Combustion Technology, Emission Control, Noise and Vibration Analysis Vehicle Dynamics, Structural Analysis, Fuel Injection Diesel Engine, Ride and Handling Simulation, Automotive Electrical and Electronics, Sensors, Motors.
CATEGORY - B		
1	Victor Forgings A-4, Focal Point, Bye Pass G.T.Road, Jalandhar-144 004	Hand tools manufacturers and exporters
2	Software Tech. Parks of India Block-4, II floor Ganga Software Tech. Complex Sector-29 Noida - 201 301	ISP to software exporting units
3	Hindustan Vidyut Products Ltd. Kanchenjunga (7th Floor), 18, Barakhamba Road, New Delhi-110001	Cables and Conductors
4	Rieter India Pvt. Ltd. 1005-1008, Hemkunt Tower 98, Nehru place, New Delhi - 110 019	Sale and Service of Textile Spinning Machinery
5	Logwell Forge Ltd. E-78, Greater Kailash-I, New Delhi-110048	Forging industry for Automobile Components
6	Hi-tech Gears Limited Oshu House Lado Sarai New Delhi 110030	Transmission Gears and Shafts
7	Munjal Showa Ltd. 9-10, Maruti Industrial Area Gurgaon - 122 015 Haryana	Automotive Components such as Shock Absorbers and Front Forks for Two Wheelers and Windows Balancers
8	Bhartia Industries Ltd. 20/4, Mathura Road Faridabad-121 006	Low tension Switchgear, Control Gear, Electrical Products
9	Shivalik Bimetals Controls Ltd. Suneja Chambers, IInd Floor H-2, Alakhnanda Commercial Complex New Delhi - 110 019	Manufacturers of Thermostatic Bimetal Strips / Components

<u>S. No</u>	<u>Name of the Organization</u>	<u>Areas of Interest</u>
10	Frick India Ltd. 21.5 KM Mathura Road, Faridabad- 121003	Industrial Refrigeration and Research in Refrigeration
11	Punsumi India Ltd. D-16 Meera Marg Bani Park Jaipur 302 016	Manufacture of Aluminum Electronic Capacitor
12	Applied Electromagnetics Pvt. Ltd. B-55, Sector-2, NOIDA- 201301	Electronics, Data Communications Microprocessor based embedded systems
13	International Softweb Ltd. Sonalika House, #283 AGCR Enclave Karkardooma, New Delhi 110 092	ERP Solutions
14	Machino Basell India Ltd. Plot No.2, Sector-33 37 th Km Milestone Delhi-Jaipur Highway Gurgaon 122 001 Haryana	Polymer Compounds
15	FLUOR Daniel India Pvt. Ltd. DLF Square, 14 th floor Jacaranda Marg DLF City-II Gurgaon Haryana 122 002	Engineering Design
16	Technip KT India Ltd. 7th floor, P-6, Ocean Complex, Sector 18, Noida - 201 301, U.P.	EPC Business
17	The Pradeshiya Industrial and Investment Corporation of U.P. Ltd., 'PICUP' Bhawan Gomti Nagar, Lucknow - 226010	Business
18	Dusk Valley Technologies Ltd. 'Apollo House' 7, Institutional Area, Sector-32, Gurgaon, Haryana-122001	Software Services
19	MINDARIKA Pvt. Ltd. 36-A, Rajasthan Udyog Nagar Delhi-110033	Design Software & hardware; Moulding; Tool Designing, Manufacturing & Heat Treatment; Quality Systems; KAN-BAN,TPS & Value Stream Mapping; DEEP Analysis; Electronic Design, Manufacturing & Assembly; Surface Treatment & Material Science

<u>S. No</u>	<u>Name of the Organization</u>	<u>Areas of Interest</u>
20	Gallium Industries Limited Plot No. 117, Sector-59 HSIDC Industrial Estate Faridabad 121 004	Manufacturers of Steel Tube and equipment

CATEGORY - C

1	C.P. Consultants (P) Ltd. B-223 Chittaranjan Park, New Delhi-110 019	Consultancy feasibility reports, Market Research, detail design engineering, Pharmaceutical formulations
2	New Life Pharmaceuticals A-246, Okhla Industrial Area, Phase-I New Delhi-110 020	Pharmaceuticals formulations
3	Allied Alloy Products E-51, Indl. Area Yamuna Nagar - 135 001 Haryana	Heat Recovery Systems, Boilers, Pressure Vessels and components thereof
4	Trak Services (P) Ltd. B-19, Defence Colony, New Delhi 110 024	Management Consultancy, Software development, Technology development
5	Infoplex Technologies Pvt. Ltd. 17/29 Bikkavolu East Godavari Distt., Andhra Pradesh - 533 343	e-commerce, Digital library
6	National Research Development Corporation 20, Zamroodpur Community Centre, Kailash Colony Extension New Delhi-110048	Transfer of technology
7	Institute De Informatica No.155, I Floor C Block Plot 32 to 57 Community Centre Janakpuri, New Delhi 58	Training, Consultancy and Software development
8	Technowledge Consultants No.156, I Floor C Block Plot 32 to 57 Community Centre Janakpuri, New Delhi - 58	Consultancy, Software, Chemicals, Training, Networking

<u>S. No</u>	<u>Name of the Organization</u>	<u>Areas of Interest</u>
9	Big Leap Academy (P) Ltd. No.302 Money Centre 4th floor No.121 Hosur Road, 7th Block Koramangala Industrial Area Bangalore - 560 095	IT Training and education
10	Adcon Instruments Pvt. Ltd. #44 Udyog Vihar Phase-I Gurgaon - 122 016	Process Control Instruments, manufacturing and servicing
11	Frontier Technologies Pvt. Ltd. A 2/20, Safdarjung Enclave New Delhi - 110 029	Electrical Cables and Accessories
12	Micromation (P) Ltd. E-38 Phase - VIII, Industrial Area, Mohali, Chandigarh Punjab-160059	Manufacturing : Electronic Cash Register, Computer Telephone Callloggers and Callindicators
13	Applied Research International B-1, Hauz Khas, New Delhi-110 016	Marine education and training, HRD, R&D in marine simulation media
14	Transwitch India Pvt. Ltd. A-2/9, Safdarjung Enclave, New Delhi-110 029	Design for Microelectronic Chips for Telecom Systems
15	Allied Industries Ltd. A 2/3, Mayapuri Indl Area, Phase I, New Delhi	Manufacturers of PVC shoe and cable, grade master batches and compounds and synthetic ironoxide
16	Communication Media Products B-7,Raj Towers, G-1, Alaknanda Shopping Complex Alaknanda, New Delhi 110 019	Office Automation, Telecommunications, Visual System
17	M. Bit Computraining Pvt. Ltd. 307, Ashirwad Complex, D-1, Green Park, New Delhi 110 016	Computer training, consultancy
18	Aquarian Overseas, BMS Centre, Plaza Cinema Building, Connaught Circus Building New Delhi-110001	Selling technology, export of laboratory chemicals
19	Quasar Systems Pvt. Ltd. D-10/2, Okhla Phase II, New Delhi -110020	On-line UPS Power Electronics, Solar Photovoltaic Energy

<u>S. No</u>	<u>Name of the Organization</u>	<u>Areas of Interest</u>
20	S. S Construction & Engineers D-19, Kalkaji New Delhi-110 019	Effluent treatment plants
21	Resistoflex Pvt. Ltd. B-103, Sector-5 Noida-201 301	Vibration shock noise isolation, systems design and production of specific isolation systems for railways, Defence industries TQM
22	Ambala Cements Limited c/o Chanderpur Works Jorian, Radaur Road Haryana(india)	Cement manufacturer
23	JLJ Financial & Management Consultants (P) Ltd. 6-B,Central Green, NH-5, Between B.K. Chowk & Dayanand Women's College N.I.T. , Faridabad	Consultancy, software development and computer education
24	Paradise Group 902, Laxmibai Nagar, New Delhi	Metal Handicrafts, Power Sector & Softwares, Metrology
25	Global Environmental Geotechnologies Pvt. Ltd. 820 8th Floor & 1401-1410 14th Floor, DLF Galleria, DLF City Phase-IV Gurgaon-122002, Haryana	Consulting Geo Technical & Civil Engg. Co.
26	CMDC Design Pvt. Ltd. C-6/3, Safdarjung Dev. Area New Delhi 110 016	Consulting Engineering Services
27	Core Engineering Group D-2 Dhawan Deep 6,Jantar Mantar Road New Delhi-110001	Consulting
28	Diamond Auto Industries Ghookna Morh Delhi-Meerut Road Ghaziabad	Manufacturers of all kinds of Pistons in Al. Alloy
29	Infoedge Solutions Pvt. Ltd. C-146, Second Floor, Sarvodaya Enclave, New Delhi-110017	Software products, Software development services, IT

<u>S. No</u>	<u>Name of the Organization</u>	<u>Areas of Interest</u>
30	Aspinwall Geotech Limited P.B.No.2, Calvetty Cochin 682 001	Erosion control Blankets, Mats, Mattings, Bio rolls, Felts, Pads & Geo agro textiles
31	Vishaka Infotech Ltd. B-97 Wazirpur Ring Road Delhi 110 052	Internet service provider
32	Dynamic Laboratories (P) Ltd. 12/12 Shakti Nagar Delhi 110 007	Pharmaceuticals formulations
33	Scope Marketing & Information Solutions (P) Ltd., No:4, 2A, Second Floor 1st Main Road, Kasturibai Nagar, Adyar, Chennai-600020	Market research, Content providers for portals, consultancy
34	Sriram Chempro Pvt. Ltd. W-54/H Sector 11 Noida - 201301 (U.P)	Job work process Polymers and Additives
35	Geoscope Information Systems (I) Ltd. M-72 Ist floor Greater Kailash II New Delhi - 48	Software : Product development
36	Protech India Ltd. H-18 (2nd Floor), Green Park Extension New Delhi - 110 016	Consultancies, Purchasing house, Market research publications
37	Beni Softwares Pvt. Ltd. 2nd Floor, Bank of India Building Avtar Nagar Road Jalandhar - 144003 Punjab	ERP Development Application Software
38	Osprey Software Technology (P) Ltd. C-56/14, Institutional Area Sector-62, Noida- 201301	Target Oriented Research & Software Development
39	Pulstron Consulting Technology Pvt. Ltd. 802,Malaygiri Tower Kaushambhi, Ghaziabad (UP)	Software Development EDM Wireless Technology Integration Applications
40	ARAG Biotech Pvt. Ltd. Plot 220, Reshimbag Nagpur-440009	vermiculture, bioagents mushrooms

S. No	Name of the Organization	Areas of Interest
41	Span International Chanderlok Building 36,Janpath,New Delhi-110001	IT Enabled Services
42	Sifter International 83,Sector-6,Industrial Area Faridabad- 121006	Agro based food processing technology

CATEGORY - D

1	Hari Shankar Singhanian Elastomer & Tyre Research Institute, Jaykaygram P.O. Tyre Factory, Kankroli Distt. Rajsamand, Rajasthan	Research, Development and Rubber
2	R & D Centre for Iron & Steel Steel Authority of India Ltd. (SAIL) Doranda, Ranchi - 834002 Jharkhand	Research and Development of Iron and Steel
3	Central Research Laboratory Bharat Electronics Ltd. Ministry of Defence P.O. Bharat Nagar - 201 010 Ghaziabad (U.P.)	R& D
4	Society for Computer Technology and Research Survey No. 27 Pune - Satara Road Dhankavdi; Pune 411 043	Computer Education and Telecommunication
5	Centre for Research & Industrial Staff Performance (CRISP) Shyamla Hills, Bhopal-462 002	Training, Consultancy and Production
6	Mahindra & Mahindra Ltd., R&D Centre (Automotive Div.) 89, MIDC, Satpur, Nashik-422007	Automotive industry (Utility Vehicles and Tractors)
7	Intercontinental Consultants and Technocrats Pvt. Ltd. A-11, Green Park, New Delhi-110016	Consulting, Project supervision R&D in new technology material and software

<u>S. No</u>	<u>Name of the Organization</u>	<u>Area of Interest</u>
8	ICICI Knowledge Park Turkapally Village, Shamirpet Mandal Ranga Reddy Distt. Hyderabad-500078 (A.P.)	Providing Infrastructure facilities for Industrial Research & Development: Biotechnology, Pharmaceuticals Technology, Chemical Technology, Material Science, Information Technology, Telecommunications etc.
9	NEDO(New Energy & Industrial Technology Development Organisation) 219, The Metropolitan Hotel NIKKO, Bangla Sahib Road New Delhi-110001	Energy Conservation, Energy Efficiency
10	Regional Research Laboratory (CSIR) Hoshangabad Road, Near Habibganj Naka Bhopal-462026 (M.P.)	Research & Development

*FINANCIAL STATEMENT
WITH
AUDITOR'S REPORT*



S. PRASHAD & CO.
CHARTERED ACCOUNTANTS

M-96, Connaught Place, New Delhi-110001
Phone: 2341-6000, 2341-7000, 2341-4500

AUDITOR'S REPORT

To
The Trustees
Foundation for Innovation and
Technology Transfer
New Delhi-110016

We have audited the attached Balance Sheet of M/S Foundation for Innovation and Technology Transfer, as at 31st March, 2003 and the Income and Expenditure Account for the year ended on that date annexed thereto and report that:

- a) We have obtained all the information and explanations, which to the best of our knowledge and belief were necessary for the purpose of our audit.
- b) In our opinion, proper books of account have been kept by the Society so far as it appears from our examination of such books.
- c) The Balance Sheet and Income and Expenditure account referred to in this report are in agreement with the books of account.
- d) In our opinion and to the best of our information and according to the explanations given to us, the said Balance Sheet and the Income and Expenditure Account read together with the Significant Accounting Policies and Notes in Schedule 10 gives a true and fair view:
 - i) in the case of the Balance Sheet of the state of affairs of the Society as at 31st March, 2003 and
 - ii) in the case of the Income and Expenditure Account, of the excess of Expenditure over Income of the Society for the year ended on that date.

For S. Prashad & Company
Chartered Accountants

Sd/-
(Vinesh Jain)
Partner

Place: New Delhi
Dated: 26.08.2003



FOUNDATION FOR INNOVATION AND TECHNOLOGY TRANSFER
BALANCE SHEET AS AT 31ST MARCH, 2003

Particulars	Schedule No.	31.03.2003 Rs.	31.03.2002 Rs.
<u>SOURCES OF FUNDS</u>			
1 CORPUS FUNDS			
SEED MONEY		16,200,000	16,200,000
2 RESERVES AND SURPLUS	1	19,364,155	24,499,474
3 RESEARCH AND DEVT. FUND	2	17,500,317	15,291,055
		<u>53,064,472</u>	<u>55,990,529</u>
<u>APPLICATION OF FUNDS</u>			
1 FIXED ASSETS	3		
(A) GROSS BLOCK		5,347,143	5,131,845
(B) LESS: DEPRECIATION		<u>3,338,727</u>	<u>2,923,721</u>
(C) NET BLOCK		2,008,416	2,208,124
2 INVESTMENTS	4	77,500,000	90,500,000
3 CURRENT ASSETS LOANS & ADVANCES	5	14,318,301	2,875,167
LESS: CURRENT LIABILITIES	6	<u>40,762,245</u>	<u>39,592,762</u>
NET CURRENT ASSETS		(26,443,944)	(36,717,595)
		<u>53,064,472</u>	<u>55,990,529</u>

NOTES ON ACCOUNTS

10

The schedule referred to above form an integral part of the accounts

As per our attached Report of even date

for S PRASHAD & CO
Chartered Accountants

Sd/-
VINESH JAIN
(PARTNER)

Sd/-
K K ROY
(MANAGER ADMINISTRATION)

Sd/-
DR. A K SENGUPTA
(MANAGING DIRECTOR)

New Delhi
Date: 26.08.2003



FOUNDATION FOR INNOVATION AND TECHNOLOGY TRANSFER
INCOME AND EXPENDITURE ACCOUNT FOR THE YEAR ENDED 31ST MARCH , 2003

Particulars	Schedule No.	<u>31.03.2003</u> <u>Rs.</u>	<u>31.03.2002</u> <u>Rs.</u>
<u>INCOME</u>			
INTEREST INCOME	7	6,969,852	8,270,089
PROJECT & CONSULTANCY INCOME	8	2,698,381	3,242,886
CORPORATE MEMBERSHIP FEE		259,000	—
OTHER INCOME		44,869	14,393
		<u>9,972,102</u>	<u>11,527,368</u>
<u>EXPENDITURE</u>			
ESTABLISHMENT EXPENSES		3,637,032	3,519,993
ADMINISTRATIVE EXPENSES	9	3,390,281	2,444,410
RESEARCH & DEVT. EXPENSES		7,309,866	—
PROMOTION EXPENSES		355,236	58,458
DEPRECIATION		415,006	428,479
		<u>15,107,421</u>	<u>6,451,340</u>
EXCESS OF INCOME OVER EXPENDITURE		(5,135,319)	5,076,028

NOTES ON ACCOUNTS **10**

The schedule referred to above form an integral part of the accounts

As per our attached Report of even date

for S PRASHAD & CO
Chartered Accountants

Sd/-
VINESH JAIN
(PARTNER)

Sd/-
K K ROY
(MANAGER ADMINISTRATION)

Sd/-
DR. A K SENGUPTA
(MANAGING DIRECTOR)

New Delhi
Date: 26.08.2003



SCHEDULES FORMING PART OF THE BALANCE SHEET

Particulars	<u>31.03.2003</u> <u>Rs.</u>	<u>31.03.2002</u> <u>Rs.</u>
SCHEDULE 1: <u>RESERVES & SURPLUS</u>		
Capital Reserve	2,555,812	2,555,812
General Reserve	21,943,662	16,867,634
Excess Of Income Over Expenditure	(5,135,319)	5,076,028
	<u>19,364,155</u>	<u>24,499,474</u>
SCHEDULE 2: <u>RESEARCH & DEVELOPMENT FUNDS</u>		
FITT Project Promotion Fund		
Opening Balance	7,395,702	5,399,502
Add: Additions during the Year	665,880	2,202,730
	<u>8,061,582</u>	<u>7,602,232</u>
Less: Utilised during the Year	— 8,061,582	206,530 7,395,702
FITT Consultant Fund		
Opening Balance	5,392,062	3,303,038
Add: Additions during the Year	1,420,793	3,352,483
	<u>6,812,885</u>	<u>6,655,521</u>
Less: Utilised during the Year	1,214,403 5,598,452	1,263,459 5,392,062
FITT Department Development Fund		
Opening Balance	2,389,291	2,855,809
Add: Additions during the Year	2,038,602	1,730,012
	<u>4,427,893</u>	<u>4,585,821</u>
Less: Utilised during the Year	701,610 3,726,283	2,196,530 2,389,291
Central Admn. Fund		
Opening Balance	—	—
Add: Additions during the Year	265,831	487,871
	<u>265,831</u>	<u>487,871</u>
Less: Utilised during the Year	265,831 —	487,871 —
IIT Student Welfare Fund		
Opening Balance	114,000 114,000	114,000 114,000
	<u>17,500,317</u>	<u>15,291,055</u>

SCHEDULE 3: **FIXED ASSETS**

(Figures in Rs.)

S.No.	Asset	Rate	GROSS BLOCK			DEPRECIATION			NET BLOCK	
			As on 1.4.2002	Additions In 2002-2003	Total	Upto 1.4.2002	For the Year	Total	As on 31.03.2003	As on 31.3.2002
1	Computers	60%	1,534,906	174,620	1,709,526	1,397,711	142,953	1,540,664	168,862	137,195
2	Furniture & Fixtures	15%	1,545,830	-	1,545,830	568,663	146,575	715,238	830,592	977,167
3	Air Conditioners	25%	356,500	-	356,500	240,053	29,112	269,165	87,335	116,447
4	Photocopier	25%	203,175	-	203,175	162,520	10,164	172,684	30,491	40,655
5	Projector	25%	22,960	-	22,960	20,949	503	21,452	1,508	2,011
6	Office Equipments	25%	616,474	40,678	657,152	450,755	47,252	498,007	159,145	165,719
7	FITT Extn. Office	5%	232,000	-	232,000	22,620	10,469	33,089	198,911	209,380
8	TBIU Office Module	5%	620,000	-	620,000	60,450	27,978	88,428	531,572	559,550
TOTAL			5,131,845	215,298	5,347,143	2,923,721	415,006	3,338,727	2,008,416	2,208,124

Particulars	<u>31.03.2003</u> <u>Rs.</u>	<u>31.03.2002</u> <u>Rs.</u>
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SCHEDULE 4: **INVESTMENTS**

Deposits With Scheduled Bank	74,400,000	90,500,000
Margin Money (deposits Under Bank Lien For Opening of LOC of Rs. 3,100,000/-)	3,100,000	—
	<u>77,500,000</u>	<u>90,500,000</u>

SCHEDULE 5: **CURRENT ASSETS, LOANS AND ADVANCES**

BALANCE WITH SCHEDULED BANK

Canara Bank	4,502,962	258,126
SBI	3,758,700	325,291
SBI FCRA Account	4,260,428	—
Tax Deducted At Source	534,583	713,372
Project Advance	1,225,603	1,400,405
Security Deposit	8,000	13,500
Devt. Support	—	155,028
Staff Advance	28,025	9,445
	<u>14,318,301</u>	<u>2,875,167</u>

Particulars	31.03.2003 Rs.	31.03.2002 Rs.
SCHEDULE 6: <u>CURRENT LIABILITIES</u>		
Advance Against Projects	40,762,245	39,592,762
	<u>40,762,245</u>	<u>39,592,762</u>
SCHEDULE 7: <u>INTEREST INCOME</u>		
Interest On Deposit With SAIL	—	2,223,855
Interest On Deposit With Banks	6,883,479	5,893,463
Interest On Savings Account	86,373	152,771
	<u>6,969,852</u>	<u>8,270,089</u>
SCHEDULE 8: <u>PROJECT & CONSULTANCY INCOME</u>		
FITT Overhead Charges	2,027,525	2,121,154
Seminar/workshops/hrd Prog	455,944	1,032,732
Royalty Income	214,912	89,000
	<u>2,698,381</u>	<u>3,242,886</u>
SCHEDULE 9: <u>ADMINISTRATIVE EXPENSES</u>		
Communication	334,837	252,358
Legal & Professional	408,890	221,155
Books & Periodicals	21,035	21,712
Printing & Stationery	148,356	59,137
Patent & Copyright	298,359	29,058
Conveyance	150,330	325,129
Membership & Subscription	30,409	15,494
Seminar & Meeting Expenses	220,285	94,120
Travelling Expenses	158,811	91,728
Contingent Expenses	89,300	74,617
Repair & Maintenance	117,321	163,758
Audit Fees	30,975	12,600
Audit Exps	7,272	811
Entertainment/hospitality	35,546	32,855
Recruitment & Training Expenses	—	98,845
Office Rent	809,280	809,280
Bank Charges	12,651	7,287
Electricity Charges	128,751	134,466
Information Support Services	387,873	—
	<u>3,390,281</u>	<u>2,444,410</u>

10. **NOTES ON ACCOUNTS**

1. **SIGNIFICANT ACCOUNTING POLICIES**

i) **Accounting Convention**

The Financial Statements are prepared under the Historical Cost Convention.

ii) **Method of Accounting**

All accounts are maintained on cash basis.

iii) **Fixed Assets And Depreciation**

Fixed assets are valued at cost and Depreciation on fixed assets is provided on Written Down Value method in accordance with the rates and provisions of the Income Tax , 1961.

iv) **Revenue Recognition**

Income on projects undertaken is recognized on the completion of the project.

Income from Consultancy, Seminars, Retainerships etc. is recognised on rendering of the service and receipt of the fees.

v) **Investments**

Investments are valued at cost.

2. Equipment purchased for the project becomes the property of the IIT (D) on the conclusion of the project as per FITT's" Guidelines for handling consultancy proposals".

3. The foundation spent a sum of Rs. 73,09,866/-during the current year, charged to Research & Development Expenses, out of the funds accumulated as per resolution dated 23.10.1993, in terms of the provisions of the Income Tax Act, 1961.

4. Previous year's figures have been regrouped/reclassified wherever considered necessary to make them comparable with those of the current year.