



Confederation of
Indian Industry



Department of Science & Technology
Government of India



A Public Private Partnership Initiative on Innovation



Initiative for Research & Innovation in Science (IRIS)

www.cii.in

www.innovation.net.in

The Promoters

- Rashtriya Vigyan Evam Prodyogiki Sanchar Parishad (RVSPS), Department of Science & Technology, Government of India.
- Confederation of Indian Industry (CII) National Committee on Technology, Chaired by Mr. Malvinder Mohan Singh,



Mr. Malvinder Singh
Chairman, CII National
Committee on
Technology (2007-08)

Managing Director & CEO, Ranbaxy Laboratories Ltd with members represented by R&D/Technology driven Industries operating in India.



Mr. Kapil Sibal
Union Minister for
Science & Technology
and Earth Sciences

- Intel® Innovation in Education.

Background

Creativity, Invention and Innovation have become key factors to achieve competitiveness for industry. These factors have also become major contributors for social development, growth and economic upliftment of a nation.

The culture of Invention and Innovation is very crucial for making possible "ideas to economic wealth" by organizations as well as individuals.

To promote Inventions and Innovations among students and youth, the Department of Science & Technology, Government of India and CII jointly launched the Young Inventors initiative: "Steer the Big Idea" in the year 2004. It was aimed at capturing the innovative ideas from young innovators for the benefit of Industry & society.

After successful completion of Steer the Big Idea 2004 & 2005 and participation of top young Indian Innovators at International Exhibition for Young Inventors (IEYI) in 2004 at Tokyo and in 2005 at Kuala Lumpur, it was felt that reach of the initiative has to be expanded to district level across the nation and Industry partners also have to be brought in.

Intel Corporation had been running a similar initiative called Intel Science Talent Discovery fair for 7 years. They joined hands with CII and DST to form the country's biggest Innovation Initiative – **Initiative for Research & Innovation in Science (IRIS)** in 2005. An Expression of Interest was signed between DST, CII and Intel and Hon'ble Minister for Science & Technology and Earth Science Mr. Kapil Sibal formally launched IRIS on 22nd February 2006 in Delhi.

The primary objective of IRIS is to recognize and reward outstanding, innovative projects in the field of science and maths. Hence, helping to promote and nurture science and scientific research amongst young Indian innovators and providing a platform for these young innovators to interact with Indian industry as well as get recognition at International events.

The IRIS initiative started its operation in 2006 by reaching out to schools across the country and invited Innovation based projects from young students. Coaching camps for students and teachers were also conducted.

The entries received from the students were evaluated by a set of national experts and short listed entries participated at the National Fair in December 2006 held at IIT Delhi. More than 260 students participated at the National Fair.

The top 10 Indian Young Innovators thus selected every year are taken to participate at the International Exhibition for Young Inventors organised by the member countries of International Forum for Invention Promotion (IFIP) where India is represented by CII and DST. These top Indian Young innovators are also taken by Intel to participate at Intel's Science & Engineering Fair in the US.



Initiatives during 2004-2006

Steer the Big Idea 2004

The first round of screening was done by an Expert committee in January 2004 and 24 projects were short listed. These applicants were invited to Homi Bhabha Centre for Science Education, Mumbai to showcase their projects. A panel of Judges selected the 10 finalists who participated in **IEYI 2004**, Tokyo, Japan.



At a Press Meet organised on the return of the 10 young innovators from Japan in Aug 2005, Mr. Kapil Sibal, Hon'ble Minister for Science & Technology advised CII & DST to provide opportunities for the students to interact with the industry so that an attempt can be made to commercialise the innovations. The young innovators also met the then Hon'ble President of India, Dr. A. P. J. Abdul Kalam. He interacted with the students and advised DST to incorporate "Children Technology Development Fund" for development & upgradation of these ideas.

Steer the Big Idea 2005: In 2005, the International Exhibition for young Inventors was held in Kuala Lumpur, Malaysia. The projects were selected after studying the innovativeness and feasibility of the short listed ideas, by a panel of experts, representing a wide spectrum of scientists, teachers, mathematicians, academicians, and industrialists. Offering a prestigious and competitive platform, to promote the spirit of inventiveness and social responsibility among students below 20 years, IEYI'05 witnessed a total of more than 100 inventions from 16 countries by almost 120 inventors.

India's intellectual colors flew high at the IEYI '05 courtesy the four young inventors whose inventions were selected to represent India at IEYI'05. Vindhya R Vyjayanthi, the young girl from Indian team won an award for her project on "**Co-relation of the radii of in-circle and circum-circle**". The award for the most outstanding project was given by Japan Institute of Invention & Innovation (JIII).



IRIS 2006

106 workshops for students and teachers were organised across the country. More than 4735 students and 1067 teachers



participated in these workshops. 202 projects were selected for the national fair out of 1200 projects. Around 800 students from various schools from Delhi visited the fair. IRIS gave opportunity for post graduate students as well as primary grade students to showcase their talents.

Total 21 awards were given at the National fair which includes special, subject category and national fair winners.

The award winners got an opportunity to represent India at IEYI 2006 and ISEF 2007.

IEYI 2006 – Hosted by CII and DST in India

India hosted IEYI 2006 in Delhi. IEYI was held alongwith the biennial flagship fair of CII -17th International Engineering & Technology Fair (IETF) held at Pragati Maidan. Around 150 students from 12 countries showcased their innovation-based projects.

Three Young Innovators from Srilanka, China and India emerged as the shining stars amongst the other Innovators at the IEYI 2006.



Nayana Sumanga Rajapakse from Sri Lanka who made an "Efficient funnel" based on the principle of Archimedes theorem. This funnel is designed to pour a commercially valuable liquid into non-transparent containers without any wastage. He won the award given by Japan Institute of Invention and Innovation (JIII) for the originality and creativity.

A team of three young students from China won the World Intellectual Property Organisation (WIPO) award for the outstanding innovation with a commercial application for his project titled "Multifunctional intelligent detector and purifier of interior air pollution". The instrument moves on its own inside the room checking the air pollution indices and keeps detecting and moving till the purification is over.

The winner of the WIPO award for the youngest innovator with the best innovation was a 12-year old boy from Coimbatore, India. Master Abhilash has made a simple no-cost device to remove pests from stored food grains.

A FEW INVENTIONS & INNOVATIONS SELECTED DURING 2004-2006

Steer the Big Idea 2004 Winners

	Name of the Project	Young Innovator	City
1.	Device useful for preventing soiling of railway tracks at the platform	Madhav Pathak	Jabalpur
2.	Herbal pesticides for storage of grains	Priyanka Guleria	Punjab
3.	Low Calorie Biscuits from Banana Peel	Rucha Vinay Joshi	Nanded
4.	Herbal formulation for controlling growth of larva	G Mookami & Janani Preethi	Chennai
5.	Optically controlled wheel-chair	Harish Chandra & B Sriram	Chennai
6.	Advanced Audio Video coding of data	Kyan Pardiwalla	Mumbai
7.	Science Educational Kit using Laser	Sudhanva Shridhar Hukkeri	Belgaum
8.	Carbon nanotubes using plant oils	Bhushan P Mahadik	Navi Mumbai
9.	Novel device for lifting the surface water of the river	Jaydeep Mandal	Murshidabad
10.	Innovative slope measuring instrument	T Sriram Kumar	Coimbatore

Steer the Big Idea 2005 Winners

	Name of the Project	Young Innovator	City
1.	Co-relation of the radii of in-circle and circum-circle	E. Vindhya R. Vyjayanthi	Secunderabad
2.	Global range electronic appliance controller[GREAC]	Ragavendra G	Chennai
3.	Extraction of Fibre from Banana Trunk	Kunal Gaurav	Begusarai (Bihar)
4.	An Improved Wheel Chair	Arpith Siromoney	Chennai

IRIS 2006 Winners – Participated at ISEF 2007

	Name of the Project	Young Innovator	City
1.	Termite Malady – A Herbal Remedy	Vaishnavi Vishwanathan	Mumbai
2.	A fast Frequency Distribution based interpolation search algorithm for ordered Lists	Ram Raghunath	Chennai
3.	Lazer Magnetic Seismograph	Rishin Behl	Mumbai
4.	Coupled Oscillator model for Grover's quantum database search algorithm	Aavishkar Apoorva Patel	Bangalore
5.	Prevention of Vehicular Tailgating Accidents	Tanay David Delima & Nikhil Khosla	Mumbai
6.	Revolutionary Spherical Wheels	Sarvesh Nevatia, Rehan Netarwala	Mumbai

IRIS 2007

IRIS is an effort by CII, DST and Intel to provide a platform for students to participate in research based science projects. IRIS reaches to the grass root level and contacts the students and teachers and educates them on how to make the projects by conducting workshops across India. This year (2007), IRIS has reached 26 states and has conducted 68 workshops for students where 40,021 students participated and 3 workshops were conducted specially for the teachers and received participation from 4,185 teachers.

All the efforts of the workshop were directed towards receiving synopses from the students. This year online submission of synopses has also been introduced. About 1,354 entries from across India have been received. The break up of the synopses category wise is as follows:

Category	Synopses received
Category I: Age 08-13 yrs	541
Category II: Age 14-20 yrs	796
Category III: Age 21-35 yrs	17

A Pre filter round was organized to eliminate entries that did not match the IRIS standards. This was conducted in 2 phases, one for Physical Sciences and the other for Life Sciences. 269 projects were short listed for further evaluation.

Final selection of the synopses for the National Fair was done by the Scientific Review Committee (SRC). The SRC comprised of esteemed judges from institutes like Tata Institute of



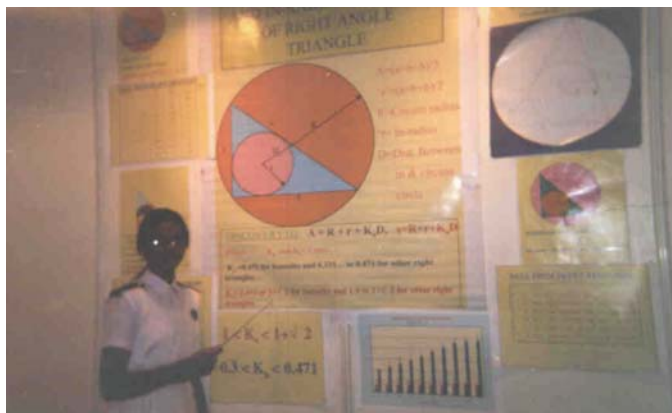
Fundamental Research (TIFR), National Institute For Research In Reproduction Health, Cancer Research Institute, Center for Ecological Science and like. Of the 269 projects, 103 projects are selected for the National Fair. These 103 participants along with the other state fair winners will take part at the IRIS National Fair. The fair is scheduled to be held from 6th December to 8th December 2007 at the Pune University, Pune.

The National Fair winners will go through a coaching session and will get a chance to represent India at the International Fairs like International Exhibition for Young Inventors to be organized in Indonesia this year and at Intel Science & Engineering Fair in US.

The IEYI 2007 is being organized by Indonesian Institute of Sciences (LIPI) in cooperation with the Local Government of Yogyakarta from 28-30th November 2007 at Taman Pintar Yogyakarta, Indonesia.



2007 ISEF winner Rishin Bhel won 6 awards and scholarships at the world's largest pre-collegiate science competition at Albuquerque, New Mexico, 2007.



Vindhya R Vyjayanthi got a special Award by JIII for the most outstanding work displayed at the Exhibition IEYI 2005 in K L, Malaysia for her project on Co-relation of the radii of in-circle and 'circum-circle'.

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