



International Science & Technology Center

Annual Report

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ISTC: Nonproliferation Through Science Cooperation



Since its founding in 1992, the ISTC has been an efficient tool in support of nonproliferation activities, providing weapons scientists in CIS the opportunity to redirect their talents to peaceful projects, fostering their integration into the global scientific community, supporting basic and applied research and technology development, and contributing to the solution of national and international S&T problems.

Through its political, legal and financial frameworks, the ISTC links the demands of international markets with the exceptional pool of scientific talent available in Russian and CIS institutes and research centers.

In 2003, following the decision by the Governing Board and seeking to more effectively serve the needs of growing international S&T collaboration, the ISTC undertook a major reorganization of its Secretariat.

By establishing new, dedicated Departments and divisions the ISTC added to the overall efficiency of its operation and re-energized its programs supporting the search for sustainable future for CIS scientists, promoting long-term partnerships and mutual benefits for all participants.

In 2003, the ISTC accomplished:

- New science project funding for 227 projects in the amount of \$74.4 million. Of this, \$30.8 million for 72 projects was provided by ISTC Partners.
- Direct grant payments to 27,684 scientists and project team members, amounting to \$46,9 million. Total redirection supported by the ISTC in 2003 is equivalent to 9062 full-time person-years.
- Addition of 28 new Partner organizations. As of December 31, 2003, the ISTC Partner list included 198 governmental and non-governmental organizations from EU, Japan, Republic of Korea, and the USA. Since the Partner Program inception in 1997, the ISTC Partners have provided over \$160 million in project funding.
- The first International Science Laboratory was formally established between the Stepanov Institute of Physics (Belarus) and the Fraunhofer Institute for Nondestructive Testing (Germany).
- In line with the decision to engage in programmatic activities, the ISTC Parties approved the Fuel Cell Targeted Initiative work plan and allocated funding for Phase I of the plan.

Statement from the Chairman of the ISTC Governing Board



DR.RONALD F LEHMAN II,

the Chairman of the Governing Board of the ISTC, is the Director of the Center for Global Security Research at Lawrence Livermore National Laboratory. Previously he was the Director of the U.S.A Arms Control and Disarmament Agency, Assistant Secretary of Defense, Chief START Negotiator, and Deputy Assistant to the President of the USA. In 1995 he was named to the President's Advisory Board on Arms Proliferation Policy.

The International Science and Technology Center awarded its first research grants in March 1994. A ten-year anniversary is typically an occasion to reflect on past achievements. The ISTC's contributions to both global security and science collaboration have been outstanding. The organization's future, however, offers even greater accomplishments, if we maintain our energy and commitment.

This year we welcome two new Parties, Canada and Tajikistan. Canada, the initiator of the G-8 Global Partnership Against the Spread of Weapons and Materials of Mass Destruction, has made its ISTC efforts a pillar of its substantial national commitment to global nonproliferation. Other states determined to join in the Global Partnership mission can and should consider engaging former weapons scientists in collaborative research through the ISTC.

The ISTC serves the mutual interest of its members in impeding proliferant states and terrorists from gaining access to weapons-relevant expertise and technology. This mission has become more complex, especially in the fields of chemistry and biology, even as threat reduction activities in military and nuclear research establishments have progressed. Russia and the other recipient countries as well as the Funding Parties have extended the reach of ISTC assistance to previously isolated facilities in several CIS states.

The ISTC's objectives remain clear:

- Provide weapons scientists in CIS states opportunities to redirect their talents to peaceful activities;
- Contribute to the solution of national and international science and technology problems;
- Reinforce the transition to the market economy;
- Support basic and applied research; and
- Promote integration of CIS scientists into the global scientific community.



Early on, the weight of the effort and impact was toward the first goal – engaging a great number of weapons scientists in meritorious research, often in basic science. This engagement remains crucial for the global fight against proliferation of weapons expertise; scientists earning a worthy standard of living, doing research they themselves conceived, can shun recruitment by proliferant states, terror networks, and the black market. On this count, the ISTC has a proud record. The ISTC, however, has always had a broader mandate to support non-proliferation and is increasingly focusing on the science and technology of highest priority to the Parties.

Thus, the ISTC is being reborn and re-examined in its second decade. Today's ISTC, advancing the reorganization and expansion of programs and expert staff begun little more than a year ago, goes far beyond project funding and offers CIS institutions a unique source of valuable skills training, information, and "matchmaking." CIS scientists are presenting their technological discoveries and, indeed, their very creativity and inventiveness to the global network of problem solvers in government, industry, services, and such fields as medicine, health and nutrition. With the strong support of the Funding Parties, the ISTC is carrying to its recipient institutes the message that being part of that global network is crucial to their survival and growth. Moreover, the ISTC is helping CIS institutions hone their capabilities to meet the global "market demand" for research & development and innovation.

The coming year will see the ISTC move its headquarters to new space provided by the Russian Federation. The facility will be renovated to the ISTC's specifications, geared toward working smarter and expanding new services to the institutes with which it works. With targeted initiatives to advance innovations further along the path from concept to prototype to marketed technology, with information technology and laboratory upgrade projects at selected institutes, workshops, patent support, and rigorous project management, the ISTC will make important new contributions to the vitality of science world–wide, especially in the CIS states.

Solid cooperation among the Parties created this new momentum. Our fine Secretariat staff has stepped up to these new opportunities. We are most grateful to our outgoing Executive Director, Dr. Michael Kroening, for his leadership during the formulation of these reforms. Also, on behalf of all of the Board, I want to express my particular appreciation to the European Union for sharing with the ISTC Dr. Didier Gambier, who was able to step in as Interim Executive Director and be effective immediately. He has kept things on track in the midst of this critical transition period.

Ronald J. Lehman I

ISTC Financial Summary

To fulfill its nonproliferation mission, the ISTC Parties, Partners, and project Collaborators contribute financial, in-kind, and human resources to the Center. These resources are used to engage weapons scientists and technical team members in peaceful science projects through ISTC Programs.

New Project Funding by SOURCE

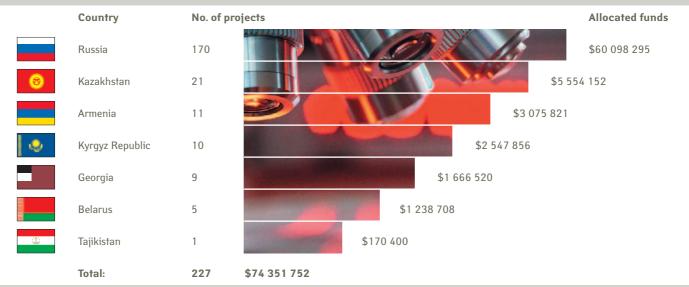


New Project Funding by TECHNOLOGY AREA

Tech area	No. of projects	Allocated funds
Biotechnology and Life Sciences	56	\$29 257 939
Environment	39	\$11 609 902
Physics	39	\$10 081 479
Fission Reactors	23	\$5 525 100
Chemistry	23	\$5 315 720
Materials	9	\$2 263 448
Non-Nuclear Energy	8	\$2 183 102
Information and Communications	8	\$2 083 273
Instrumentation	7	\$2 039 035
Space, Aircraft and		
Surface Transportation	4	\$1 576 502
Manufacturing Technology	4	\$1 076 700
Fusion	4	\$825 872
Other	3	\$513 680
Total	227	\$74 351 752





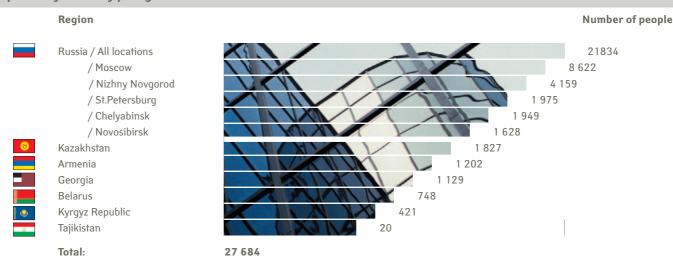


Participants Redirected to ISTC Projects in 2003

In 2003, the ISTC paid 27 684 project participants US \$46 925 555 in grant payments for a total of 1 993 582 person-days of effort on ISTC projects.



Participants by Country / Region



ISTC Official Events in 2003



Chairman of the ISTC Governing Board,
Dr. Ronald Lehman, addresses ISTC Party delegations and guests at the reception given by
Ambassador Alexander Vershbow at his Moscow
residence.

The Scientific Advisory Committee held its 26th meeting at the Representation of the European Commission in Paris, France.

The Governing Board approved the reorganization of the ISTC Secretariat into four departments: Science, Technology, Partnering, and Operations.

The Executive Director visited the Academy of Sciences in Tajikistan to discuss Tajikistan's accession to the ISTC. He was welcomed by Asomuddin A. Saidov, Chairman of the Committee on International Relations in Parliament; Nigina M. Sharpova, Deputy Prime Minister; and Salohiddin A. Masriddinov, Deputy Minister, Ministry of Foreign Affairs.

The Republic of Tajikistan completed its accession to the ISTC agreement, becoming the 12th ISTC Party.

The ISTC Governing Board held its 30th meeting at ISTC Headquarters in Moscow, approving 49 new projects representing over \$8.1 million and Euro 5.3 million in new funding. Canada formally expressed its interest in acceding to the ISTC.

The Ambassador from Greece, His Excellency Dimitrios Paraskavopoulos, invited Governing Board Executive Session delegates to an evening reception. In addition, the Ambassador from the United States, His Excellency Alexander Vershbow, welcomed Governing Board delegations to a reception in his Spaso House residence in Moscow.

The ISTC was hosted by the Science and Technology Center in Ukraine to discuss integration of common activities between the Science Centers.

The Scientific Advisory Committee held its 27th meeting at ISTC headquarters in Moscow. The future role of SAC in ISTC activities was discussed at this meeting.

The ISTC conducted its 31st Funding Session, approving 38 new projects representing over \$7 million and Euro 2.4 million in funding.



Prof. Ulmas Mirsaidov, President of the Academy of Sciences, declares the opening of the ISTC Information Office in Tajikistan. The ceremony was attended by the Minister of Foreign Affairs of Tajikistan, ISTC Executive Director, and heads of the ISTC Parties' diplomatic missions in Dushanbe.

The Executive Director attended the opening of a summer school on radiation physics in the Kyrgyz Republic. The weeklong conference was coorganized by the Issyk-Kul State University and the National Academy of Sciences of the Kyrgyz Republic.

The ISTC opened its Tajik Information Office in the Presidium of the
Academy of Sciences in Dushanbe, Republic of Tajikistan. The opening
ceremony included welcoming addresses from the Republic of Tajikistan
Minister of Foreign Affairs - Mr. Talbak Nazarov, the President of the
Academy of Sciences - Prof. Ulmas Mirsaidov, and the ISTC Executive
Director.

The ISTC Scientific Advisory Council held its 6th annual seminar in Moscow with the theme «Science and Computing.»

The staff of the ISTC commemorated the end of the tenure of Professor Michael Kroening and thanked him for his 3 years of service to the Center. Dr. Didier Gambier arrived at the ISTC to assume the position of Interim Executive Director.

The Georgian Ministry of Foreign Affairs organized an ISTC reporting conference including participants of all government and scientific organizations working with the ISTC.

The ISTC Governing Board held its 32nd meeting at the ISTC headquarters in Moscow, approving 65 new projects for a total of \$9.3 million and Euro 8.3 million in funding.

The ISTC participated in an EU Interparliamentary Conference held in Strasbourg, France on the G-8 Global Partnership Against the Spread of Weapons of Mass Destruction.

The Interim Executive Director visited Canada for discussions on Canada's accession to the ISTC and integration into ISTC activities.

Parties to the ISTC Agreement

Founding Parties

Other Parties

CIS Parties





























European Union

Japan

Russian Federation

United States of America

Norway

Republic of Korea

Armenia

Belarus

Georgia

Kazakhstan

Tajikistan Republic

Governing Board

Coordination Committee

Scientific Advisory Committee

Secretariat

Armenia Branch Office Belarus Branch Office Georgia Branch Office Kazakhstan Branch Office Kyrgyz Branch Office Tajik Information Office

The Governing Board includes representatives of the European Union, Japan, Russian Federation, and United States, plus one rotating seat for a member CIS country, held by Kyrgyz Republic in 2003.

The Coordination Committee representatives are appointed by the Parties and meet prior to Governing Board meetings to review details of projects to be considered by the Board, discuss coordination of project funding, and exchange views on policy and other issues to be brought before the Governing Board.

The Scientific Advisory Committee provides expert scientific evaluation of project proposals, determines new directions for project and program activities, and evaluates ongoing projects.

Members of The Governing Board:

Chair (USA) European Union

Japan

Russian Federation

United States of America

Kyrgyz Republic

Ronald F. Lehman II Achilleas Mitsos

Jun Niimi

Akira Takamatsu

Lev Ryabev

Vladimir Pavlinov

Victor Alessi

Tynymbek Ormonbekov

Members of The Scientific Advisory Committee:

Chair (Japan)

European Union

United States of America

Russian Federation

Yasushi Seki

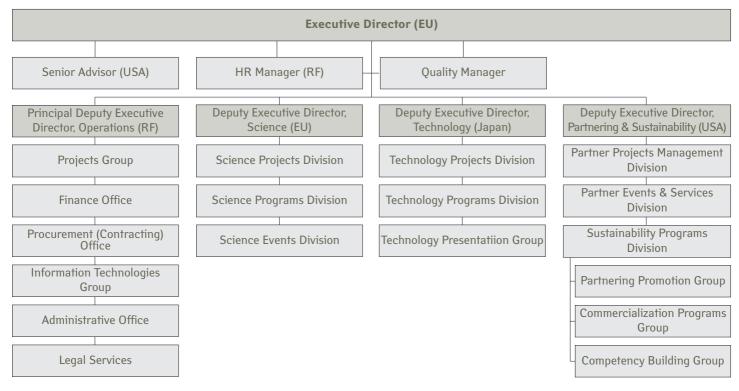
Yutaka Murakami Jean-Pierre Contzen

Alain Pompidou

Evgeny Avrorin Yuri Trutnev Steven Gitomer

Upendra Rohatgi Singh

ISTC Secretariat Structure



Headquartered in Moscow with five Branch Offices and an Information Office in six CIS countries, the Secretariat is the executive body of the ISTC. It implements the decisions of the Governing Board and manages the daily operations of the Center. Its international staff of over 200 scientific and administrative personnel oversees and monitors more than 1000 active projects, provides training and business support to CIS project managers, and implements the many Center programs that support nonproliferation.







Dr. Didier Gambier

From 2000 through September 2003, the Secretariat was headed by Prof. Dr. Michael Kroening, succeeded by Interim Executive Director Dr. Didier Gambier.



Through the efforts of the Science Department, the ISTC sponsors research in scientific areas of interest to ISTC Parties and in line with stated national scientific priorities. This process of directly matching national priorities with demonstrated scientific talent offers an enhanced opportunity for the engagement to become sustainable, resulting in the successful redirection of the WMD scientist.

Science Projects Division

The Science Projects Division hosts the core activity of the Science Department - to manage projects and programs that are principally scientific in their orientation.

There are currently 369 active projects in the Science Projects Division, representing over \$115 million in funding. In 2003 alone, the ISTC Governing Board allocated almost \$25 million for 80 projects in the Science Projects Division.

Science Programs Division

The Science Programs Division manages an evolving and fluid group of supporting programs that provide Russian and CIS scientists the ability to participate in international scientific issues and problems-solving.

Communications Support Program (CSP)

The Communications Support Program (CSP) provides communications infrastructure to deserving recipient organizations throughout the ISTC service territory. By December 31, 2003, a total of 26 CSP projects have been funded. Of this number 14 have been completed, one is being revised and the remaining 11 are active projects.

Cooperative Science

Cooperative Science activities are aimed to increase the efficiency and sustainability of efforts to integrate CIS WMD experts into the international scientific community. The Cooperative Science initiatives reaffirm the positive experience gained through implementation of the ISTC Science Projects Program, recognizing the need for a more systematic and structured approach to the goal of the long-term sustainability of scientific teams and institutes. International Science Laboratories Program is designed to join the forces, skills and competencies of Russian, CIS and international scientists in joint laboratories to work collectively on issues of global importance. In December 2003 an Interim Framework Agreement for creation of a joint laboratory "Optical and Laser Diagnostics" in Minsk was signed by the ISTC, the B. I. Stepanov Institute of Physics of the National Academy of Sciences of Belarus, and the Fraunhofer Institute for Nondestructive Testing (Germany) as the Initial Partner.

Science Events Division

The Science Events Division plans and hosts events providing a platform for Russian and CIS scientists to highlight their abilities and cooperate with scientific colleagues around the world. Through its Seminar and Workshop Programs, the Division arranges ISTC-sponsored events and cooperates with other organizations to participate in international conferences to provide WMD experts the opportunity to exchange scientific views and information with colleagues from around the world and to establish sustainable cooperation.



«Safety of Mega-Cities» International Conference (Moscow, October 2003) was co-organized by the ISTC, the Russian Federation Ministry for Emergency Situations, and the Moscow City Government. The conference featured over 30 reports and numerous presentations of modern emergency prevention and rescue technologies.



«Systems and Technologies for Future Exploration and Development of Space» (Moscow, June 2003). The conference was organized by the ISTC and the International Academy of Astronautics. Photo: poster presentation by Institute of Medical and Biological Problems.



The Technology Department of the ISTC hosts project and programmatic efforts, and engages in valorization efforts to provide Russian and CIS scientists assistance with the commercialization process.

Technology Projects Division

The Technology Projects Division manages projects and programs with a technological focus, with the aim of developing these technologies to create long-term sustainability for former weapons scientists engaged in such projects.

There are currently 365 active projects in the Technology Projects Division, representing almost \$110 million in funding. In 2003 alone, the ISTC Governing Board allocated over \$20 million for 77 projects in the Technology Projects Division.

Technology Programs Division

The Technology Programs Division manages a number of supporting programs that provide Russian and CIS scientists the ability to participate in solution of international scientific issues and problems.

Patent Support Program provides financial support to recipient institutions to cover costs for the initial stage of national patenting in the territories of the Parties. In 2003, the ISTC received 34 patenting applications of which 23 were funded.

Chief Science Coordinator (CSC) deals with technology promotion. The CSC responsibilities include management and oversight of the activities related with target programs and support programs.

Technology Presentations Group

This group is responsible for the presentation of technologies resulting from ISTC projects as well as promising technologies offered by CIS scientists. The group manages the Science & Technologies in CIS Internet portal (http://tech-db.istc.ru) created within the framework of the ISTC Technical Database Program. In 2003, the ISTC welcomed the Russian Federation Ministry for Industry, Science and Technologies and the Russian Basic Research Foundation as new portal members.



In February 2003, the Russian Academy of Sciences and the ISTC sent a joint delegation to the NEDO Nanotechnology Exhibition in Tokyo, Japan. The RAS/ISTC presentations aroused vivid interest among exhibition participants and visitors.



Dr. Larisa Tomilova from the Institute of Physiologically Active Substances receives the Prize of the Government of Russian Federation for the technology developed in the course of implementing ISTC Project 1526.

The Partnering & Sustainability Department

ISTC Partnering Event, 12 – 13 June 2003, Amsterdam



CIS scientists and ISTC staff delegation to the ISTC topical workshop on nanomaterials, metals, alloys coatings, industrial ceramics and polymers.

Having made significant progress toward its nonproliferation objectives, the ISTC strives to achieve successful redirection of former weapon scientists into peaceful, self-supporting activities, assisting in their transition into market-based economies, and completing their integration into the global scientific community.

To achieve these goals, the Partnering and Sustainability Department aims to establish strategic partnerships between CIS institutes and their counterparts in government agencies and private industry worldwide. The department activities support two main objectives. The first is to provide dedicated and professional management and support for Partner projects (Partner Projects Division). The second objective is to develop programs and activities to create and maintain relationships with Partners and find new approaches to contribute to the long-term employment of weapons experts (Sustainability Division).

Partner Projects Division

The Partner Projects Division provides project management services for partner projects. Partner Project Managers (PPMs) ensure the smooth initiation and implementation of the Partner's projects, address Partners' concerns and wishes, and serve as the main contact point between ISTC, the Partner and CIS institution.

To date, the ISTC has approximately 200 Partners with twentyeight new Partners registered in 2003. This year, over \$30 million was dedicated for 65 Partner projects in Russia, Belarus, Armenia, Georgia, Kazakhstan, and Kyrgyzstan. Since 1997, Partners have funded over 400 projects worth \$160 million.





The event sparked off many questions and constructive dialogues between the Dutch participants and the guests from the CIS countries.



Sustainability Programs Division

The Sustainability Programs Division focuses on strengthening efforts to move weapons experts away from dependence on ISTC funding by obtaining successful, self-supporting careers. The division is organized in the following Groups, which have independent activities but share a common focus on sustainability:

Partner Promotion Group

This Group recruits new Partners, organizes promotion events and training activities, and matches customer needs with CIS expertise. Promotion activities strive to bring Partners and CIS institutes together for strategic partnerships to develop and implement projects as well as to bring technologies with commercial potential to market.

The «Partner Information & Satisfaction Survey» conducted in 2003 showed that the services and activities of the Partner Program work well once a project is underway, and the majority of Partners would consider working with the ISTC in the future.

Commercialization Group

The Commercialization Group is a newly created function to support scientists and institutes in their efforts to commercialize their technologies. Activities include evaluating the technical and market viability of technologies, developing business plans and financial planning, protecting intellectual property, and locating venture funds, incubators and other business accelerators. Furthermore, the Group is responsible for the Targeted Initiatives, a new program whose tasks, activities, and projects focus on the commercialization of a single technology area (e.g. fuel cells).

Competency Building Group

Training is a key component to the redirection of weapons experts. The group offers business management training and preparation for ISTC-sponsored international conferences and meetings among others. As of Jan 2004, the Competency Building Program (CBP) will initiate a number of new activities to improve basic skill sets for the management teams of the Institutes to promote greater partnerships with CIS institutes as well as the graduation of the scientists to their own longterm civilian careers.



In November 2003, the Firestop Chemicals Ltd. of Great Britain, the Volgograd Chemical Company VOCCO, and the ISTC signed a trilateral agreement for the commercialization of a new ecologically safe flame retardant technology. This agreement marks the first of many anticipated successes in commercialization



The ISTC Operations Department provides centralized professional service to other departments of the Center, implements Board decisions within its jurisdiction, and provides services to project participants, institutes and organizations

The Department incorporates the following units:



The ISTC Information Technologies Group supports the Center's website (www.istc.ru) and a unique Internet portal «Science & Technologies in CIS» (tech-db.istc.ru)

Legal Services

The function of Legal Services is to provide integrated legal support to the various offices and tasks within the Center. This service also coordinates legal services provided from external resources, Parties and Partners.

Personnel Group

The primary task of this group is to develop and implement the ISTC Personnel Policy. This includes employee hiring and training procedures, coordination of the annual performance reviews, providing necessary information for executive employment decisions, keeping archives, and preparing statistics.

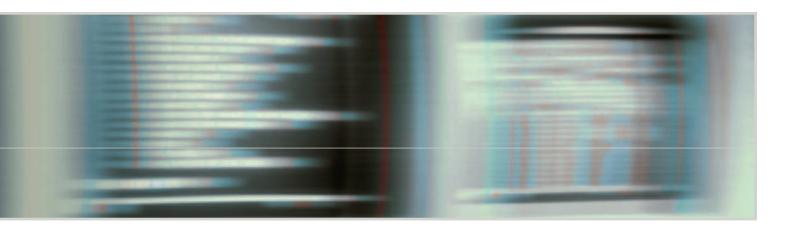
Information Technologies Group

This division is responsible for the standardized and uniform information technology support at the ISTC. It implements the ISTC information policy, maintains Center's centralized information resources, maintains and further develops the ISTC telecommunications, develops software for automating all existing ISTC processes, provides everyday maintenance of ISTC local area network (LAN) and related equipment, and organizes remote access to LAN for ISTC staff and ISTC Parties.

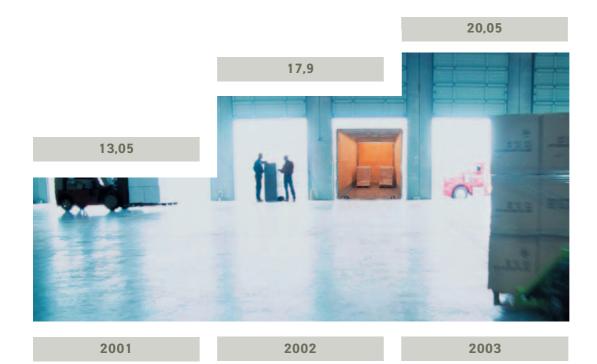
Projects Group

This group provides centralized support for the Project life cycle. This includes receipt, registration, and tracking or proposals, preparation and implementation of project agreements. The group consists of two major subunits - Proposal Processing Sector, and Project Agreement Processing Sector. The major functions of the Proposals Processing unit include all procedures related to project proposal processing – from registering proposals and submitting them to the ISTC parties to providing feedback to the applicants and performing necessary consultation at the projects pre-funding stage. The main functions of the Project Agreement unit include: preparation of Project Agreements on proposals approved by the Board; assuring compliance of the Work Plan with the initial Proposal and comments and conditions placed by the Board and ISTC Parties; tracking milestones of the Agreements; and implementing project completion procedures. In 2003, the Group registered, processed and sent to the ISTC Parties 432 regular project proposals.

72 Partner projects were also registered and sent for further processing.



Procurement of Equipment/Materials/Services for ISTC Projects in 2001-2003 (US \$ Mil)



Administrative Office

The Administrative office is responsible for maintaining the ISTC Secretariat infrastructure and securing everyday operations of the Center in a professional way and at internationally accepted standards. Organizationally, the office is divided into four groups:

- Operations Planning Group (plans, tracks, reports and proposes budget adjustments for administrative expenses)
- Infrastructure Group (maintains office facilities in due working condition)
- Translating/Interpreting Service (provides translation of documents and interpretation at meetings and individual conversations)
- Travel Group (performs centralized travel arrangements for the ISTC staff and ISTC projects participants).
 In 2003, the Group facilitated about 2,000 travels of ISTC project participants.

Summary of ISTC Project Funding

		20	1994-2003				
Tachnology Area / Tachnology Field	F	unded	Co	mpleted		Funded	
Technology Area / Technology Field	Proj.	\$ Value	Proj.	\$ Value	Proj.	\$ Value	
Biotechnology and Life Sciences Biochemistry, Cytology, Genetics and Molecular Biology, Ecology, Immunology, Microbiology, Nutrition, Pathology, Pharmacology, Physiology, Public Health, Radiobiology	56	29 257 939	52	12 328 985	397	146 770 981	
Chemistry Analytical Chemistry, Basic and Synthetic Chemistry, Industrial Chemistry and Chemical Process Engineering, Photo and Radiation Chemistry, Physical and Theoretical Chemistry, Polymer Chemistry	23	5 315 720	17	2 816 772	107	26 843 861	
Environment Air Pollution and Control, Environmental Health and Safety, Modeling and Risk Assessment, Monitoring and Instrumentation, Radioactive Waste Treatment, Remediation and Decontamination, Seismic Monitoring, Solid Waste Pollution and Control, Waste Disposal, Water Pollution and Control	39	11 609 902	33	8 299 426	307	89 973 567	
Fission Reactors Decommissioning, Experiments, Fuel Cycle, Isotopes, Materials, Modeling, Nuclear and Other Technical Data, Nuclear Instrumentation, Nuclear Safety and Safeguarding, Reactor Concept, Reactor Engineering and NPP, Reactor Fuels and Fuel Engineering	23	5 525 100	14	2 091 057	198	61 869 571	
Fusion Hybrid Systems and Fuel Cycle, Inertial Confinement Systems, Magnetic Confinement Systems, Plasma Physics	4	825 872	4	756 201	43	12 249 884	
Information and Communications Data Storage and Peripherals, High-Definition Imaging and Displays, High Performance Computing and Networking, Microelectronics and Optoelectronics, Sensors and Signal Processing, Software	8	2 083 273	10	2,105,573	84	20 922 177	
Instrumentation Detection Devices, Measuring Instruments	7	2 039 035	12	2 514 190	104	28 829 356	
Manufacturing Technology CAD and CAM, Engineering Materials, Machinery and Tools, Manufacturing, Planning, Processing and Control, Plant Design and Maintenance, Robotics, Tribology	4	1 076 700	6	1 477 396	56	18 564 083	
Materials Ceramics, Composites, Electronic and Photonic Materials, Explosives, High Performance Metals and Alloys, Materials Synthesis and Processing	9	2 263 448	20	4 760 387	157	50 794 433	
Non-Nuclear Energy Batteries and Components, Electric Power Production, Fuel Conversion, Fuels, Geothermal Energy, Heating and Cooling Systems, Miscellaneous Energy Conversion, Solar Energy	8	2 183 102	6	724 893	47	15 728 556	
Other	1	30 000	0	0	19	3 623 216	
Other Basic Sciences Agriculture, Building Industry Technology, Electrotechnology, Geology, Natural Resources and Earth Sciences	2	483 680	2	627 094	23	4 889 617	
Physics Atomic and Nuclear Physics, Fluid Mechanics and Gas Dynamics, Optics and Lasers, Particles, Fields and Accelerator Physics, Plasma Physics, Radio-frequency Waves, Solid State Physics, Structural Mechanics	39	10 081 479	35	6 247 826	299	69 419 506	
Space, Aircraft and Surface Transportation Aeronautics, Astronomy, Extraterrestrial Exploration, Manned Spacecraft, Space Launch Vehicles and Support Equipment, Space Safety, Spacecraft Trajectories and Flight Mechanics, Surface Transportation, Unmanned Spacecraft	4	1 576 502	9	1 711 677	79	22 847 728	
Total:	227	74 351 752	220	46 461 477	1920	573 326 536	

ISTC Secretariat Contact Information

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Calendar

Part	2004										2005																			
The content of the	JAI	JANUARY FEBRUARY						JANUARY								FEBRUARY														
S	mo	tu	we	th	fr	sa	su	mo	tu	we	th	fr	sa	su	mo	tu	we	th	fr	sa	SU	mo	tu	we	th	fr	sa	su		
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