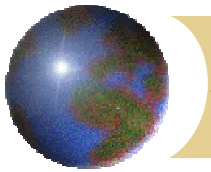


Overview of NSF's International Science and Engineering Activities



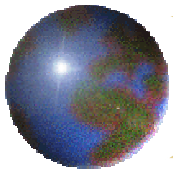
**National Science Foundation
Office of International Science and Engineering (OISE)**

**Thomas Weber
Director, OISE**

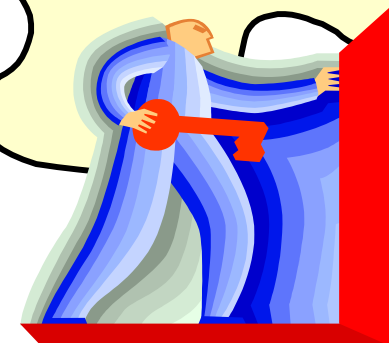


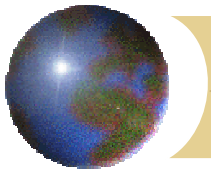
“Global collaboration – among scientists, engineers, educators, industry and governments – can speed the transformation of new knowledge into new products, processes and services, and in their wake produce new jobs, create wealth, and improve the standard of living and quality of life worldwide.”

*NSF Director Arden L. Bement, Jr.
August 2005 Materials World Network Symposium, Cancun,
Mexico*



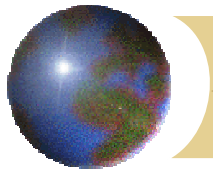
Integrating International at NSF





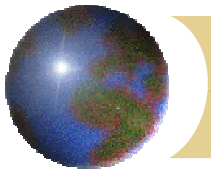
Why Collaborate ?

- Achieve significant outcomes
 - Generate research results that cannot be done alone
- Access
 - Expertise, Facilities, Infrastructure, Data
- Leverage Resources
 - Investments, Personnel, Equipment, Knowledge
- Next Generation of Globally Engaged Scientists/Engineers
- Develop/Expand Networks
- Strategic Positioning
 - Leader vs. Strong Follower



NSF International Objectives

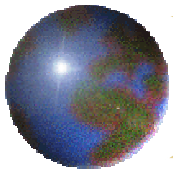
- Advance the frontiers of science and engineering
- Prepare a globally-engaged U.S. S&E workforce
- Build and strengthen effective collaborations and institutional partnerships
- Contribute to broader USG foreign policy efforts



NSF and Developing Countries

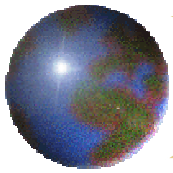
“NSF should work closely with other Federal technical agencies and multilateral scientific organizations that have S&E interests in the developing countries, and with domestic and international development assistance organizations in seeking out opportunities, identifying goals and targets, and developing cooperative projects and partnerships.”

*National Science Board's Recommendation
2000 Interim Report
Toward a More Effective NSF Role in International
Science and Engineering*

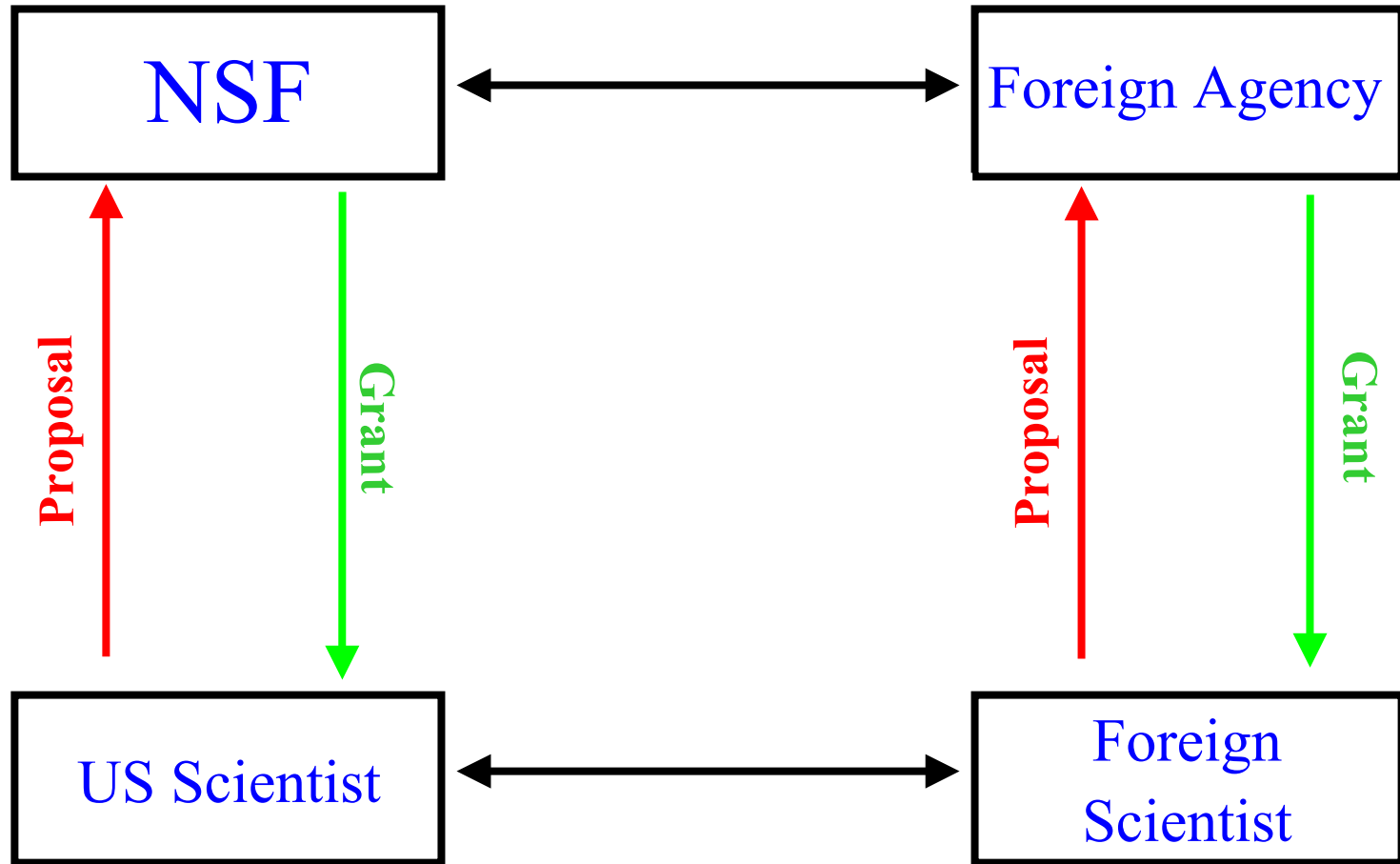


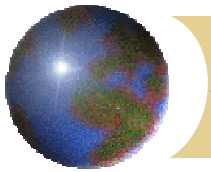
NSF and Developing Countries

- NSF pursues collaborative and mutually beneficial activities with developing countries consistent with its mandate to advance the U.S. S&E enterprise. NSF does not have a technical assistance mandate.
- International activities are **funded by ALL of the disciplinary programs...**
 - As part of regular awards
 - As supplements to regular awards
- **But** not all NSF directorates equally fund activities involving developing countries...
 - E.g., Great majority of Africa-related grants related to biology, geology, atmospheric science and anthropology.



So How Does the Collaboration Work?



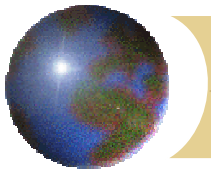


NSF and Developing Countries

How NSF Engages

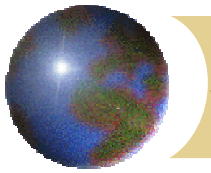
- Promotes bilateral/regional cooperation through networks of scientists and engineers.
 - E.g., re: Global Climate Change—Inter-American Institute for Global Climate Change Research or the Asia-Pacific Network for Global Change Research’s program “Scientific Capacity Building/Enhancement for Sustainable Development”
- Facilitates connections between research communities in the U.S. and developing countries by investing in cyberinfrastructure.
 - E.g., International Research Network Connections in Latin America
- Works and/or partners with U.S. and international development assistance organizations.
 - E.g., USAID, CRDF, TWAS, Rockefeller Foundation





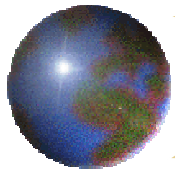
OISE In A Nutshell

- **Office:**
 - **5 Geographical Groups + Cross-cutting Teams**
 - **3 NSF Overseas Offices – China, Europe, Japan**
- **Budget:** **FY06 - \$34.52 Million (Current Plan)**
 FY07 - \$40.61 Million (Requested)
- **Programmatic Goals:**
 - **Enhance research excellence through international collaboration**
 - **Foster the development of the next generation of globally engaged U.S. scientists and engineers**
- **Support research/education activities in any NSF-supported discipline and in any region of the world**



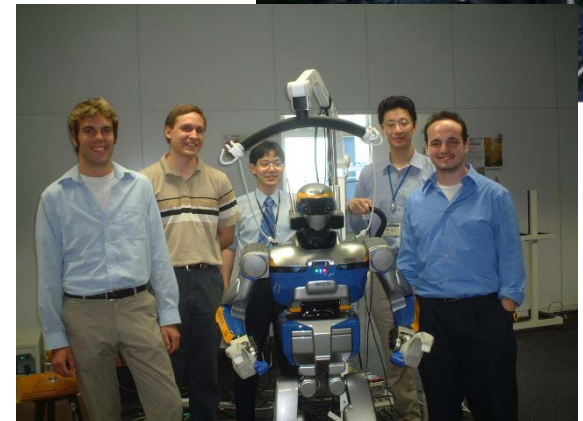
Key Elements for OISE Funding

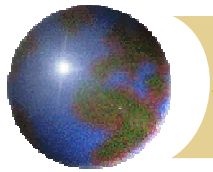
- Intellectual Collaboration
- Synergistic—utilizes skills, expertise, facilities of foreign counterparts
- Junior researchers & students
- Catalytic—new international collaboration



Types of OISE Support

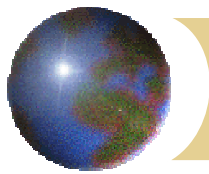
- Planning Visits
- Workshops
- Coop. Research Projects
- Center-to-Center Linkages
- Postdoctoral Researchers
- Students
- Other





OISE People Investments

- **International Research Fellowships**
 - Recent Ph.D's, 9-24 months + re-entry
- **Doctoral Dissertation Enhancement Projects**
- **Pan-American Advanced Studies Institutes**
 - Intensive seminars, Ph.D's/grad students
- **Graduate Student Summer Institute**
 - 8-week research programs, 5 Asian countries
- **International Research Experiences for Students (IRES)**
 - Global, flexible model for undergrad/graduate student research training
- **Research Experiences for Undergraduates/Teachers**



Graduate Research Programs



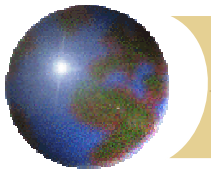
Summer Institutes

- Language study and cultural orientation
- Professional visits
- Internship in a research lab
- Programs in Australia, China, Korea, Japan, and Taiwan

PASIs

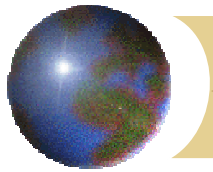
- 10-15 lecturers; 30-50 students
- Physical, mathematical, engineering, biological sciences
- 45+ funded in last 5 years
- Foreign researcher support





OISE Research Investments

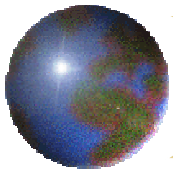
- International Planning Visits and Workshops
- Partnerships for International Research and Education (PIRE)
 - Institution-focused models
 - Larger award size and duration - \$2.5 M; 5 years
- Co-fund with Research Directorates/Offices
- NSF Priority and Cross-Cutting Programs
 - Biocomplexity, Math Sciences, Human and Social Dynamics, Nano, Cyber, Climate Change, Homeland security, Discovery K-12, IGERT, IPY, REUs, RETs



International Polar Year

- Working with OPP to support NSF's and USG's IPY goals
 - Advancement of science; next generation of scientists/engineers; broadening participation
- Exploit existing mechanisms:
 - Summer Institutes, PASIs, PIRE
 - Dear Colleague Letter
- Develop new opportunities:
 - K-12 focus: summer camp; teachers at the poles
 - Underrepresented groups





Thank You!

<http://www.nsf.gov/oise>

tweber@nsf.gov