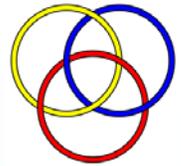




**Enabling the nation's future through  
discovery, learning and innovation**



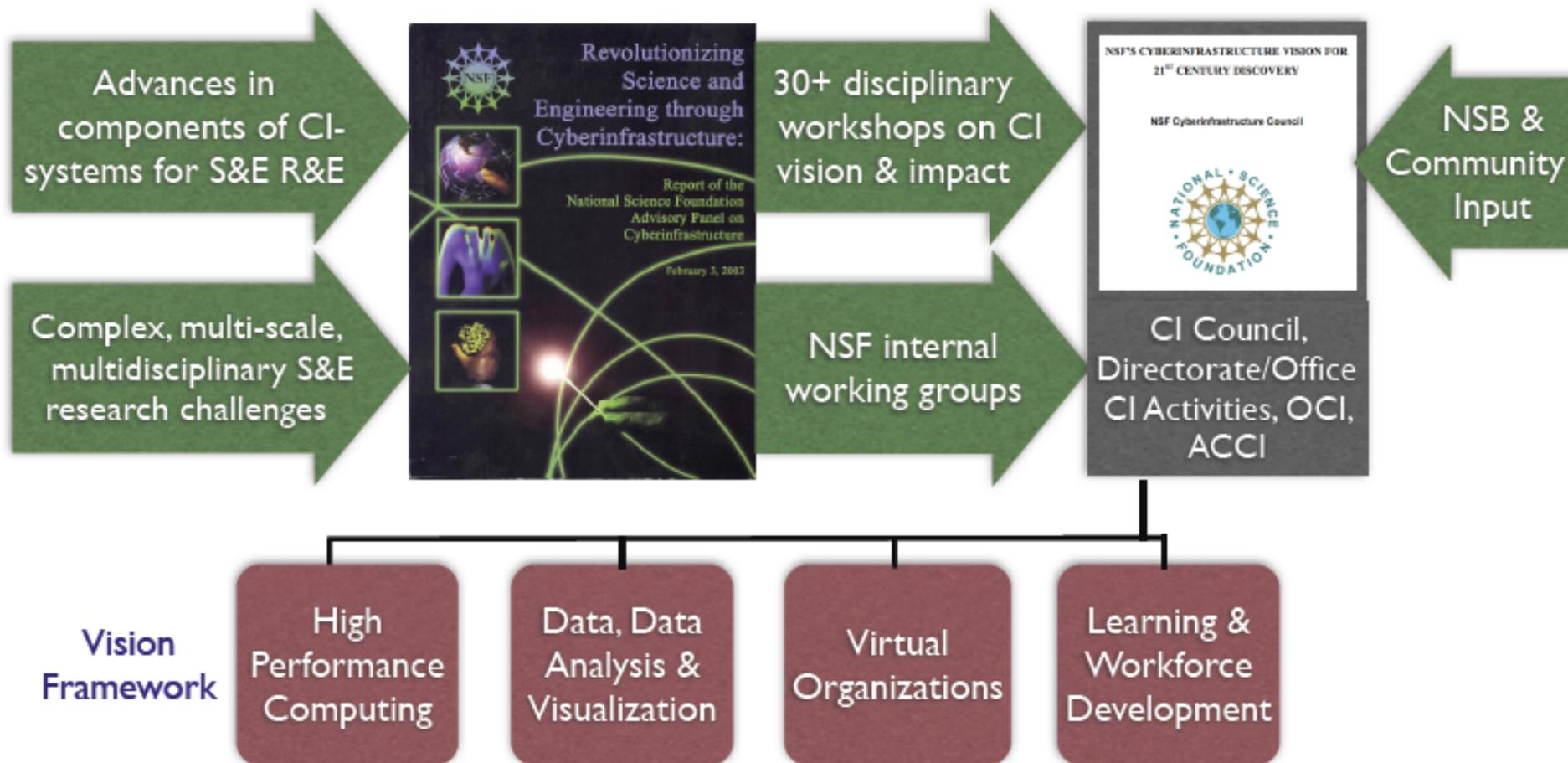
## Cyberinfrastructure ...



... is the organized aggregate of technologies that enable us to access and integrate today's information technology resources—data and storage, computation, communication, visualization, networking, scientific instruments, expertise—to facilitate science and engineering goals.

*- Fran Berman, Director, SDSC*

# Vision and Activities Based on Broad and Diverse Community Engagement

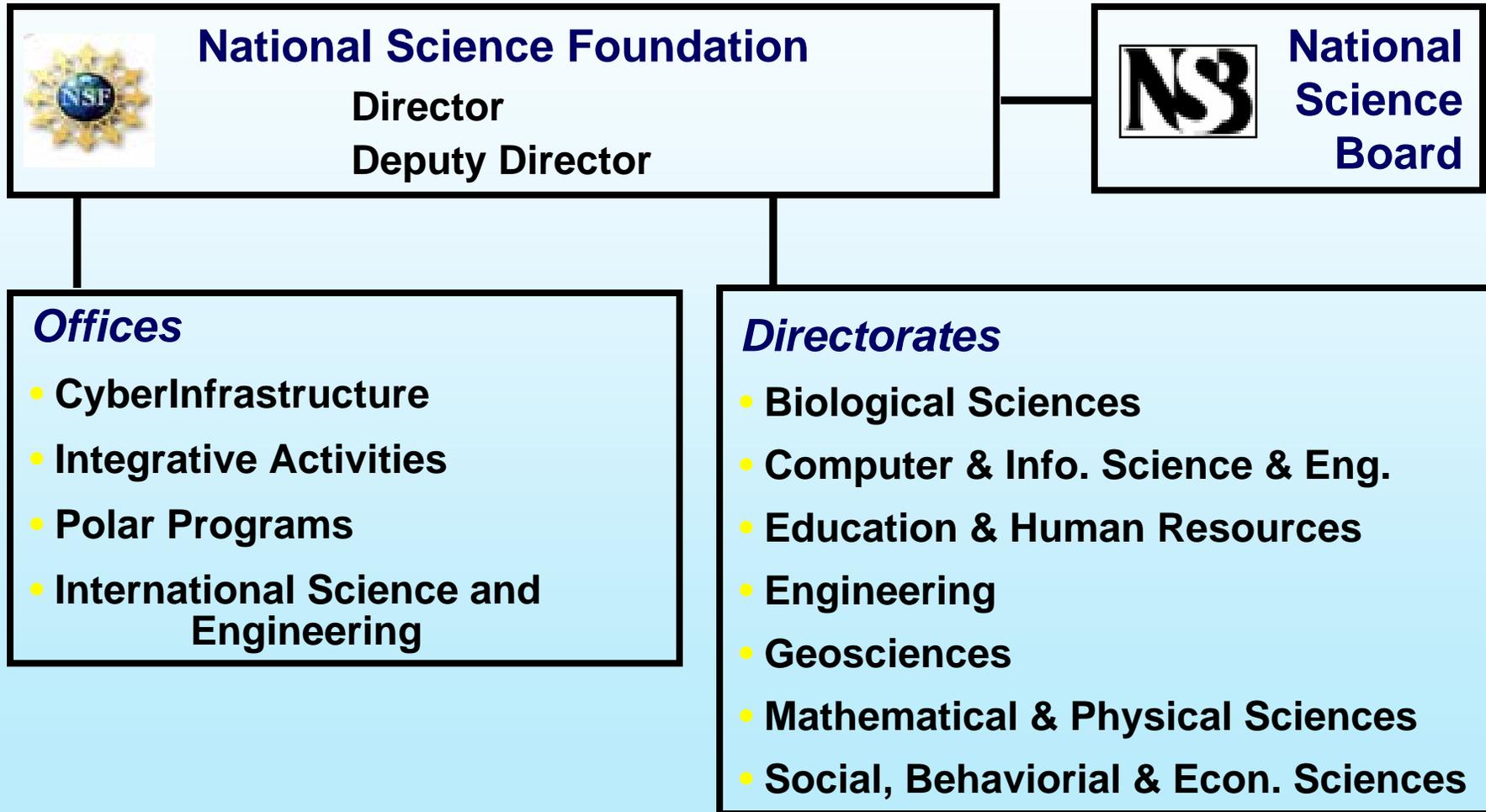
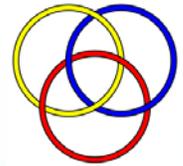


- All directorates and offices support cyberinfrastructure.
- Science-driven partnerships between creation, provisioning and use of CI
- Supports integrated research and education and broadened access and participation.



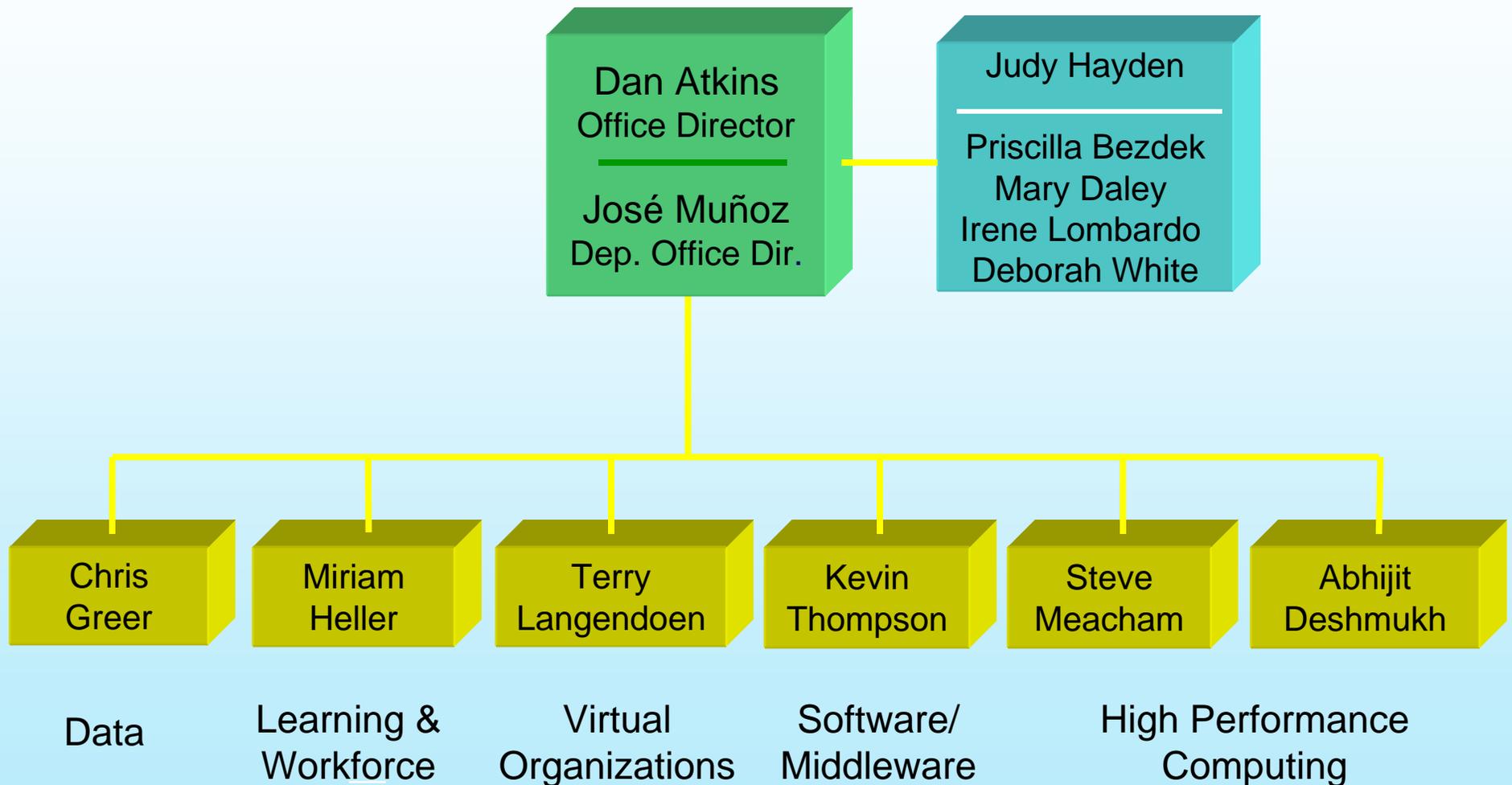
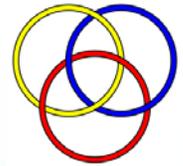


# NSF Organization



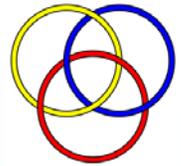


# Office of CyberInfrastructure (OCI)





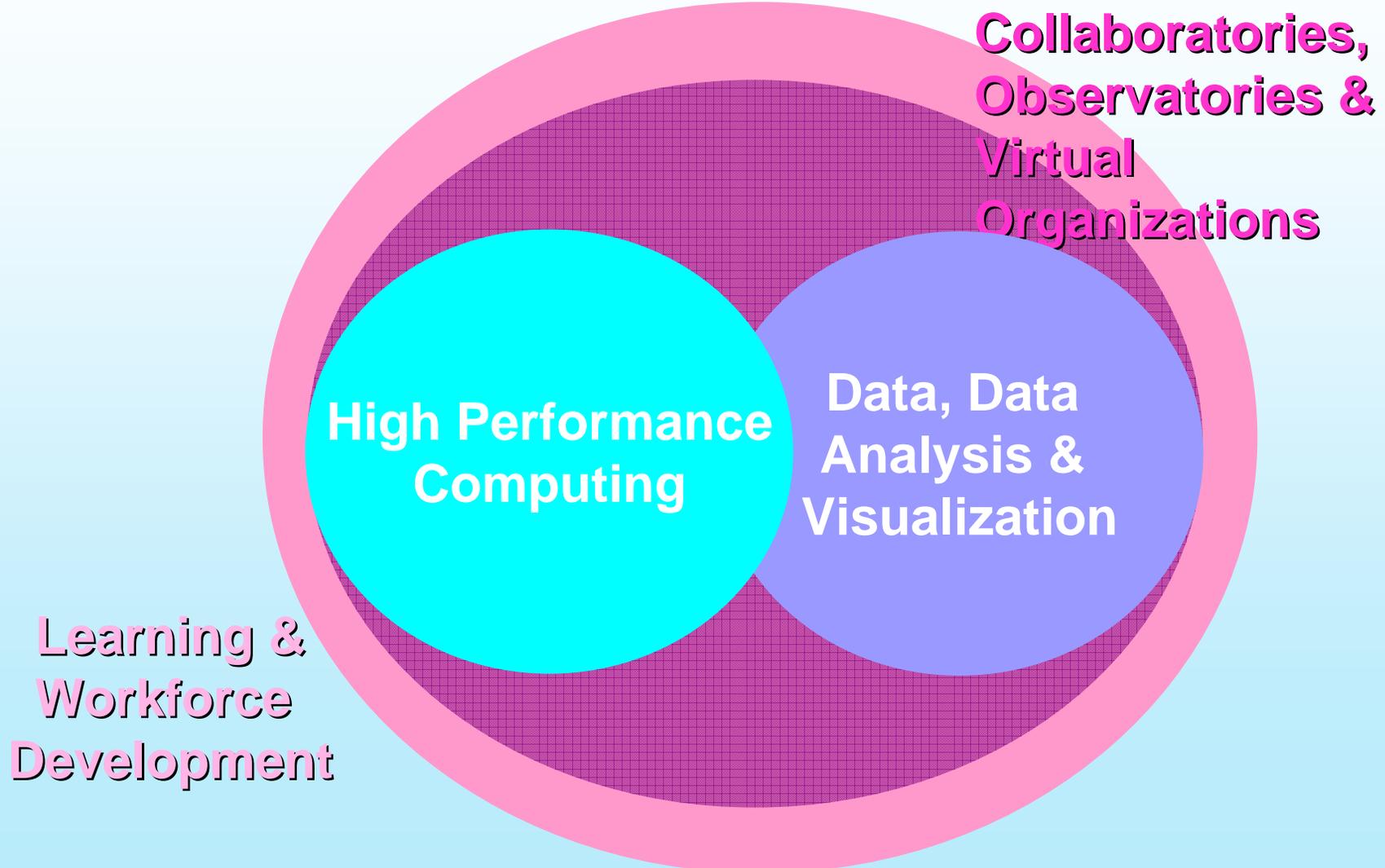
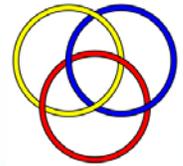
## OCI Mission



To serve the science, technology, engineering, and mathematics communities in creating, using and sustaining a comprehensive cyberinfrastructure essential to 21st century advances in science and engineering research and education.

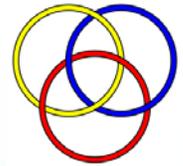


# CI Vision : 4 Interrelated Perspectives





# WWW.NSF.GOV/OCI



HOME | FUNDING | AWARDS | DISCOVERIES | NEWS | PUBLICATIONS | STATISTICS | ABOUT | FastLane

 National Science Foundation  
OFFICE OF  
Cyberinfrastructure

SEARCH  
NSF Web Site [v]  
 [go]

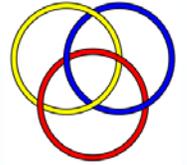
OCI Home | OCI Funding | OCI Awards | OCI Discoveries | OCI News | About OCI

Cyberinfrastructure - stimulating advances in 21st century science and engineering

<b>About OCI</b> <a href="#">View OCI Staff Directory</a> <a href="#">Search OCI Staff Directory</a> <input type="text"/> [go] <a href="#">General Information About OCI</a> <a href="#">Career Opportunities</a> <a href="#">Advisory Committee</a> <a href="#">Budget Excerpt</a> <b>How to Prepare Your Proposal</b> <a href="#">Grant Proposal Guide</a> <a href="#">Frequently Asked Questions</a> <a href="#">Other Types of Proposals</a> <a href="#">Regional Grants Conferences</a> <b>How to Manage Your Award</b> <a href="#">Grant Policy Manual</a> <a href="#">Grant General Conditions</a>	<b>Special Announcements</b> <ul style="list-style-type: none"><li>• <a href="#">Career Opportunities - Dear Colleague Letter, October 17, 2006</a></li><li>• <a href="#">Vacancy Position in the Office of Cyberinfrastructure, September 25, 2006</a></li><li>• <a href="#">Petascale Acquisition Forum, June 19, 2006</a></li><li>• <a href="#">Petascale Acquisition Forum, Mar 24, '06</a></li><li>• <a href="#">Request for Community Input, January 30, 2006</a></li><li>• <a href="#">HPC Acquisition Benchmarks</a></li><li>• <a href="#">NSF Invites Input on HPC perf. requirements</a></li></ul> <b>Recently Announced Funding Opportunities</b> <a href="#">See All</a> <b>Software Development for Cyberinfrastructure</b> (NSF 07-503) Posted October 11, 2006 <b>STRATEGIC TECHNOLOGIES FOR CYBERINFRASTRUCTURE</b> (PD 06-7231) Posted September 29, 2006	<b>Additional OCI Resources</b> <a href="#">CI Vision - version 7.1</a> <a href="#">Reports and Workshops Relating to Cyberinfrastructure and Its Impacts</a> <a href="#">A Process-Oriented Approach to Engineering Cyberinfrastructure</a> <a href="#">OCI Presentations</a> <a href="#">International Research Network Connections (IRNC)</a> <a href="#">Cyberenvironment Project Management: Lessons Learned</a> <b>Publications</b> <a href="#">See All</a> <a href="#">Report of Blue-Ribbon Advisory Panel on Cyberinfrastructure</a> <b>Other Site Features</b>
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October 24, 2006

Office of CyberInfrastructure



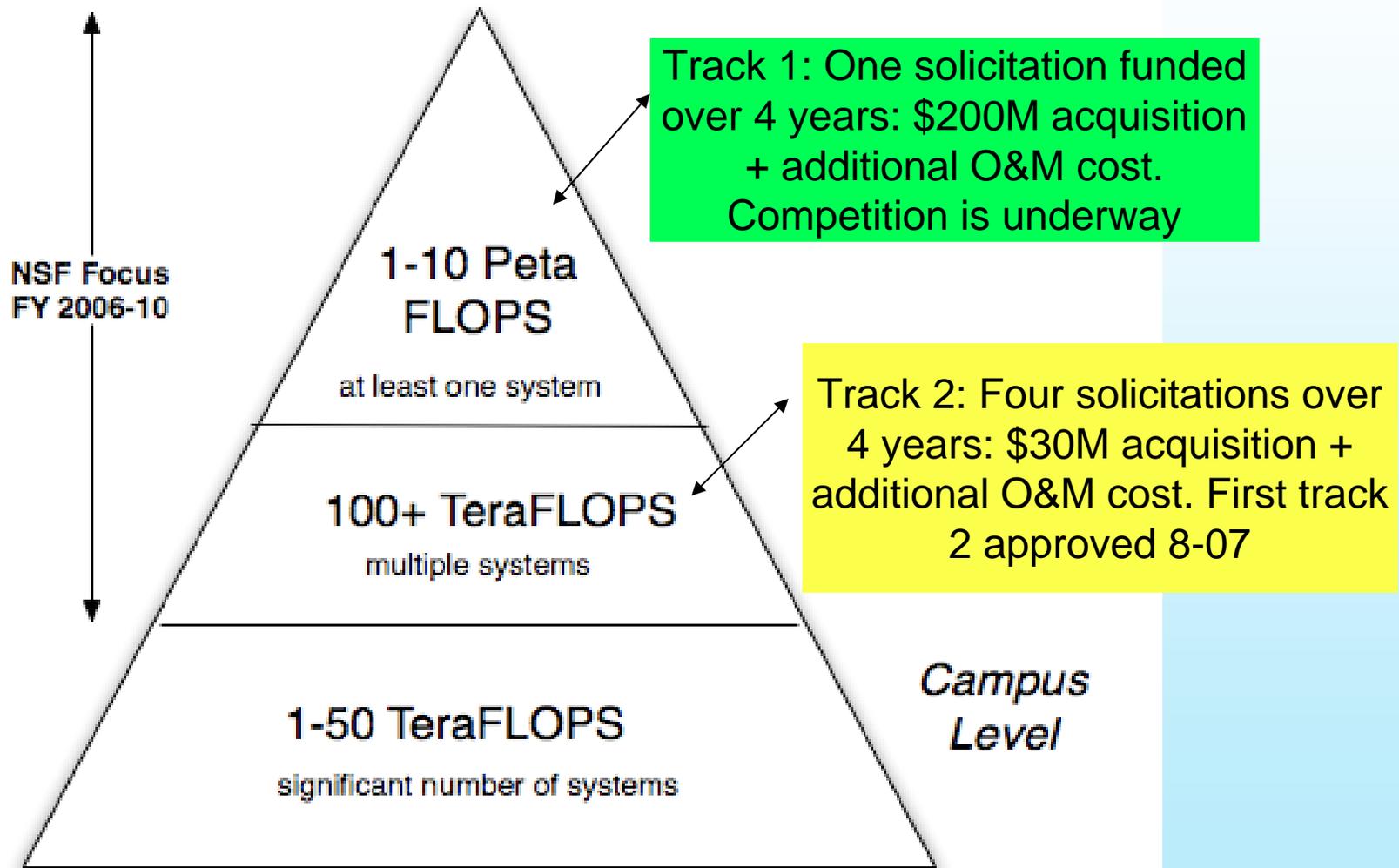
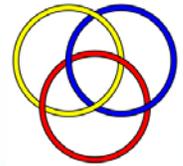
# High Performance Computing (HPC)

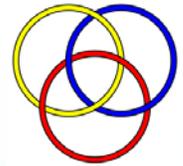
October 24, 2006

Office of CyberInfrastructure



# High Performance Computing





# High Performance Computing System Acquisition: Towards a Petascale Computing Environment for Science and Engineering

## Program Solicitation NSF 05-625 (Track 2)

Full Proposal Deadline(s):

Last business day in November Through 2008:

November 30, 2006

November 30, 2007

November 28, 2008



News



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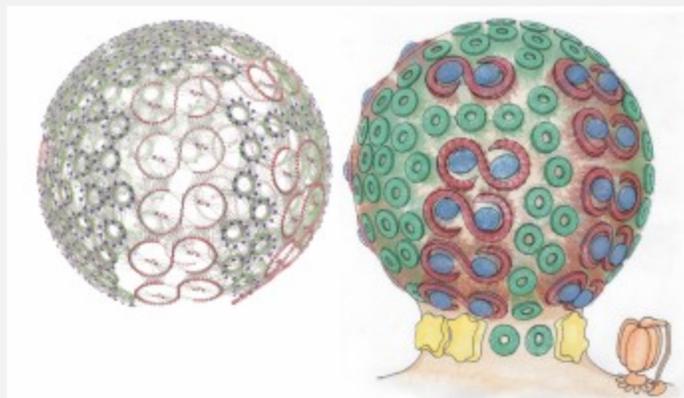
[Engineering](#)

[Mathematics](#)

Press Release 06-137

## National Science Foundation Awards Texas Advanced Computing Center \$59 Million for High-Performance Computing

University and industry consortium to deploy powerful general-purpose computing system

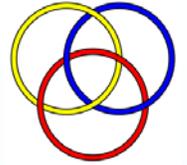


Scientists will use the TACC computer to simulate the 10 million atoms in this bacterial organelle.

[Credit and Larger Version](#)

September 29, 2006

The National Science Foundation (NSF) has made a five-year, \$59 million award to the Texas Advanced Computing Center (TACC) at The University of Texas (UT) at Austin and its partners at Arizona State University and Cornell University to acquire, operate and support a high-performance computing system that will provide unprecedented



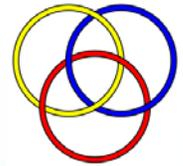
# Learning and Workforce Development (LWD)

October 24, 2006

Office of CyberInfrastructure



# Cyberinfrastructure Training, Education, Advancement, and Mentoring for Our 21st Century Workforce (CI-TEAM)



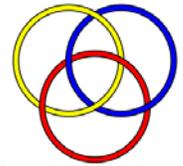
Program Solicitation: NSF 06-548

## Goals:

- **Prepare current and future generations of scientists, engineers, and educators to use, support, deploy, develop, and design cyberinfrastructure; and**
- **Foster inclusion in cyberinfrastructure activities of diverse groups of people and organizations, with particular emphasis on traditionally underrepresented groups.**



## Cyberinfrastructure Training, Education, Advancement, and Mentoring for Our 21st Century Workforce (CI-TEAM)

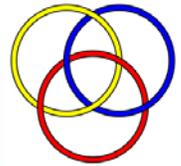


### Supports Two Types of Projects:

- **Demonstration Project:** Exploratory with the potential to serve as pathfinder for larger-scale implementation activities in the future (up to \$250K total, 1-2 yrs).
- **Implementation Project:** Expected to deliver sustainable learning and workforce development activities that complement ongoing NSF investment in cyberinfrastructure (up to \$1M total 2-3 yrs).



# Cyberinfrastructure Training, Education, Advancement, and Mentoring for Our 21st Century Workforce (CI-TEAM)



## FY06 CI-Team Award:

*“Cyber-Infrastructure for Engineering Informatics Education”*

William Regli, Drexel University

Satyandra Gupta, Univ. Maryland College Park,

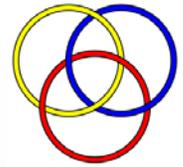
Ferrier, Nicola J. Univ. Wisconsin-Madison,

Ming Lin, Univ. North Carolina at Chapel Hill

**Focus:** Use of “biologically-inspired robotic systems as a means of engaging engineering and computer science students in the creation of physically realized systems.”



# Cross-Cutting Programs



HPC

DATA

Virtual Organizations

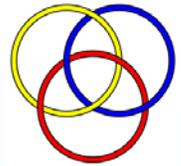
Learning/Workforce

Strategic Technologies for Cyberinfrastructure (STCI)

Software Development for Cyberinfrastructure (SDCI)



## STRATEGIC TECHNOLOGIES FOR CYBERINFRASTRUCTURE (STCI)



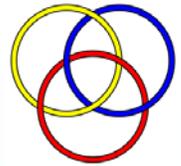
- Standing Program
- Two target dates each year:

2<sup>nd</sup> Thursday in February & August

- Unsolicited proposals for the development and/or demonstration of CI services and resources or for CI education, outreach and training activities that fall outside the scope of other programs at NSF or elsewhere.



# SOFTWARE DEVELOPMENT FOR CYBERINFRASTRUCTURE (SDCI)

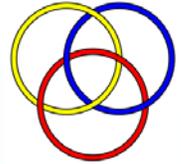


## Program Solicitation NSF 07-503

- Full Proposal Deadline: January 22, 2007
- Estimated Number of Awards: 10 to 20
- Award amounts:
  - \$50,000 - \$1,000,000 a year
  - 2-3 years



# SOFTWARE DEVELOPMENT FOR CYBERINFRASTRUCTURE (SDCI)

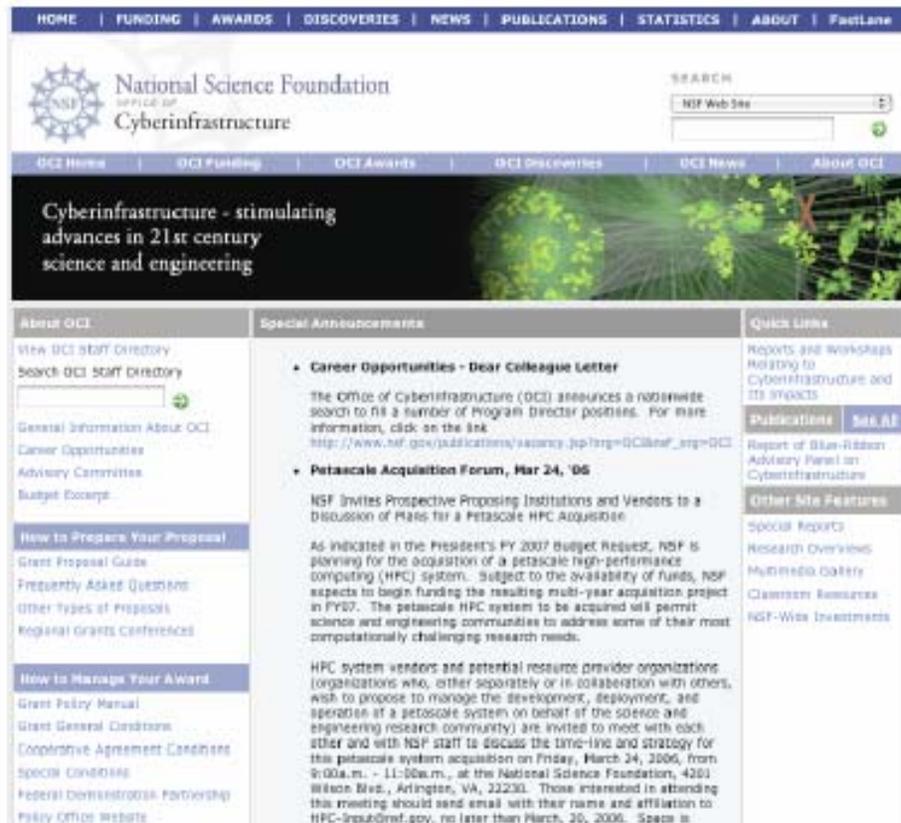


## Focus areas for FY07

Software and tools for:

- High Performance Computing (HPC) environments
- Digital data acquisition, discovery, access, analysis, and preservation
- Middleware capabilities and services to support distributed resource sharing and virtual organizations

# [www.nsf.gov/oci/](http://www.nsf.gov/oci/)



The screenshot shows the NSF OCI website homepage. At the top, there is a navigation bar with links: HOME | FUNDING | AWARDS | DISCOVERIES | NEWS | PUBLICATIONS | STATISTICS | ABOUT | FactLane. Below this is the NSF logo and the text "National Science Foundation OFFICE OF Cyberinfrastructure". A search bar is visible with "NSF Web Site" entered. A secondary navigation bar includes: OCI Home | OCI Funding | OCI Awards | OCI Discoveries | OCI News | About OCI. The main content area features a banner with the text "Cyberinfrastructure - stimulating advances in 21st century science and engineering" and a background image of a network. Below the banner are three columns of content:

- About OCI:** View OCI Staff Directory, Search OCI Staff Directory, General Information About OCI, Career Opportunities, Advisory Committees, Budget Excerpt.
- Special Announcements:**
  - Career Opportunities - Dear Colleague Letter:** The Office of Cyberinfrastructure (OCI) announces a nationwide search to fill a number of Program Director positions. For more information, click on the link [http://www.nsf.gov/publications/specialty.jsp?org=OCI&ref\\_org=OCI](http://www.nsf.gov/publications/specialty.jsp?org=OCI&ref_org=OCI)
  - Petascale Acquisition Forum, Mar 24, '06:** NSF invites Prospective Proposing Institutions and Vendors to a Discussion of Plans for a Petascale HPC Acquisition. As indicated in the President's FY 2007 Budget Request, NSF is planning for the acquisition of a petascale high-performance computing (HPC) system. Subject to the availability of funds, NSF expects to begin funding the resulting multi-year acquisition project in FY07. The petascale HPC system to be acquired will permit science and engineering communities to address some of their most computationally challenging research needs. HPC system vendors and potential resource provider organizations (organizations who, either separately or in collaboration with others, wish to propose to manage the development, deployment, and operation of a petascale system on behalf of the science and engineering research community) are invited to meet with each other and with NSF staff to discuss the time-line and strategy for this petascale system acquisition on Friday, March 24, 2006, from 9:00a.m. - 11:50a.m., at the National Science Foundation, 4201 Wilson Blvd., Arlington, VA, 22232. Those interested in attending this meeting should send email with their name and affiliation to [HPC-Input@nsf.gov](mailto:HPC-Input@nsf.gov), no later than March, 20, 2006. Space is
- Quick Links:** Reports and Workshops Relating to Cyberinfrastructure and Its Impacts, Publications, Report of Blue-Ribbon Advisory Panel on Cyberinfrastructure, Other Site Features, Special Reports, Research Overview, Multimedia Gallery, Classroom Resources, NSF-Wide Investments.

## NSF'S CYBERINFRASTRUCTURE VISION FOR 21<sup>ST</sup> CENTURY DISCOVERY

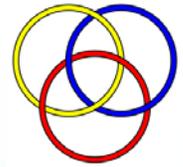
NSF Cyberinfrastructure Council



Several Active Solicitations Posted  
Seeking more program officers.

[www.nsf.gov/od/  
oci/ci-v7.pdf](http://www.nsf.gov/od/oci/ci-v7.pdf)





## Contact Information

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**[cgreer@nsf.gov](mailto:cgreer@nsf.gov)**