



1st GENI Engineering Conference: NSF Welcome

Suzi Iacono, Senior Science Advisor

*Directorate for Computer and Information Science and
Engineering (CISE), National Science Foundation*

University of Minnesota, October 10, 2007



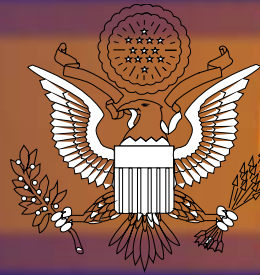
Talk Outline

- ✦ Welcome from Washington, D.C.!
- ✦ The NSF context
- ✦ GENI

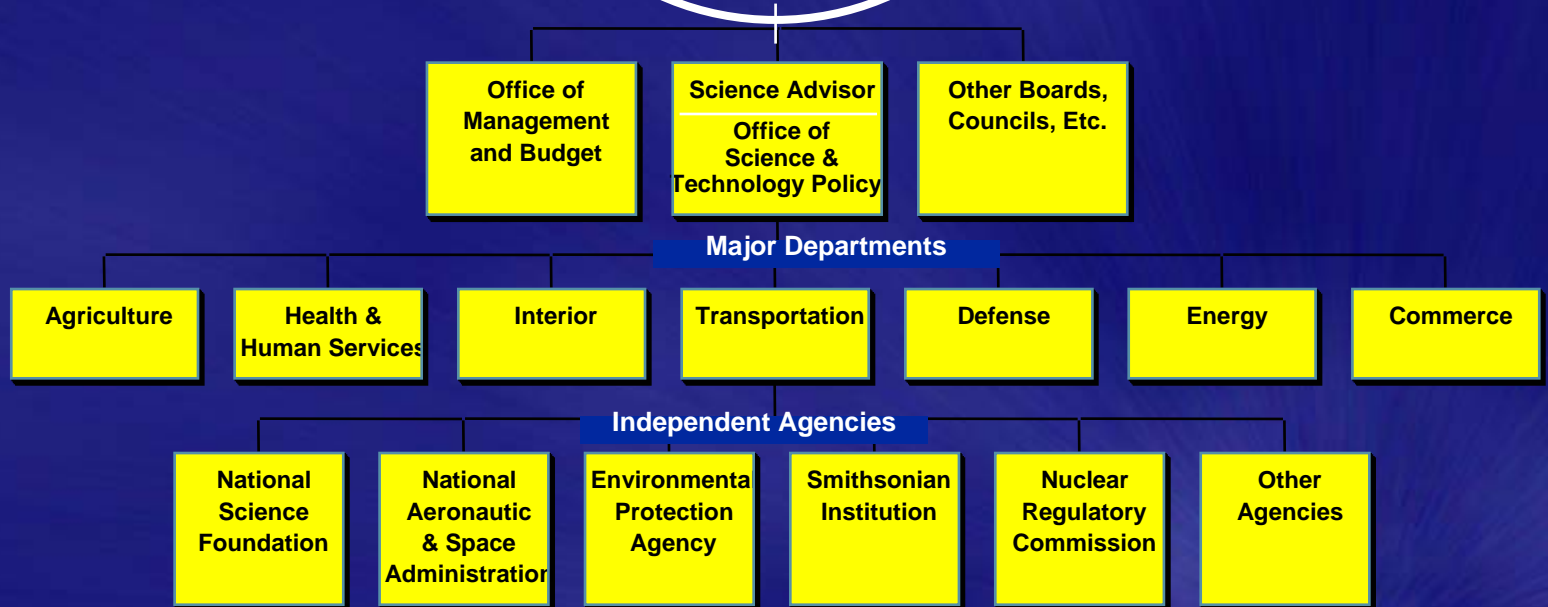








The President of the United States







SEARCH

NSF Web Site

Announcement of FY 2008 Budget Request to Congress, Slide 6 of 27

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FY 2008 Budget Request by Appropriations Account (millions)

2008
BUDGET
REQUEST

Appropriations Account	FY 2008 Request	Change from FY 2007 Request	
Research & Related Activities	\$5,131.69	\$365.74	(7.7%)
Education & Human Resources ¹	\$750.60	\$34.38	(4.8%)
Major Research Equipment & Facilities Construction	\$244.74	\$4.29	(1.8%)
Agency Operations & Award Management	\$285.59	\$3.77	(1.3%)
National Science Board	\$4.93	\$0.12	(3.1%)
Inspector General	\$12.35	\$0.49	(4.1%)
TOTAL, NSF	\$6,429.00	\$408.79	(6.8%)


Totals may not add due to rounding.
¹Funding for EPSCoR is moved to ISRA in FY 2008.

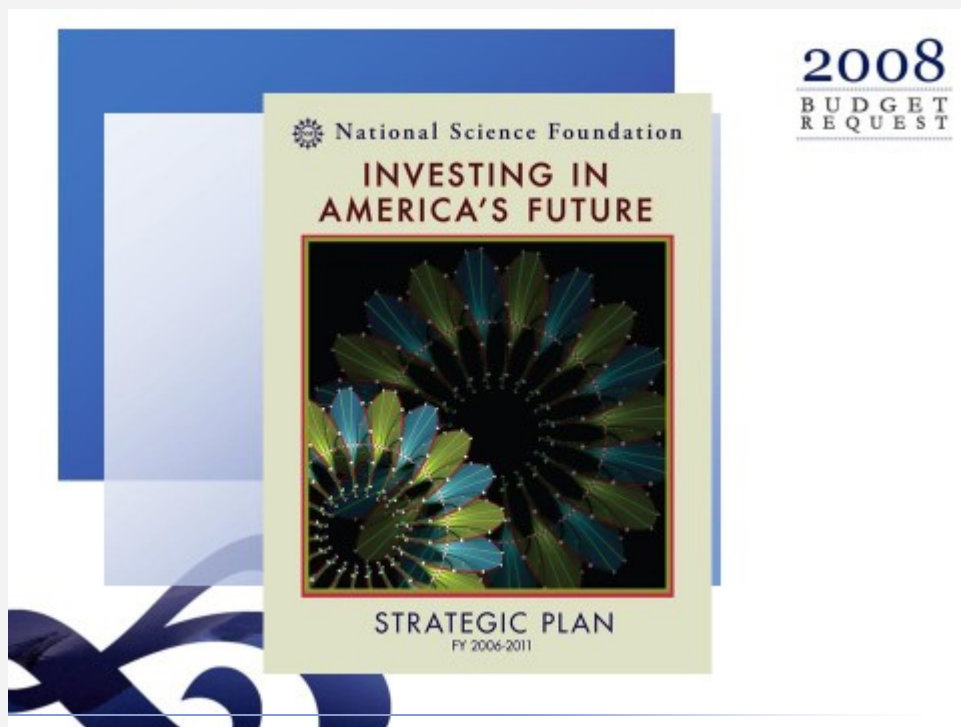
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NSF Mission



To promote the progress of
science;
to advance the national health,
prosperity, and welfare;
and to secure the national
defense.





NSF Strategic Plan FY 2006-2011: Investment Priorities

- ◆ Discovery

- ◆ Promote transformational, multi-disciplinary research.
- ◆ Further US economic competitiveness.

- ◆ Learning

- ◆ Develop methods to bridge critical junctures in STEM education pathways.
- ◆ Prepare a diverse, globally engaged STEM workforce.

- ◆ Research Infrastructure

- ◆ Identify and support the next generation of large research facilities.
- ◆ Strengthen the nation's collaborative advantage by developing unique networks and innovative partnerships.

- ◆ Stewardship

- ◆ Improve our processes to recruit and select highly qualified reviewers and panelists.

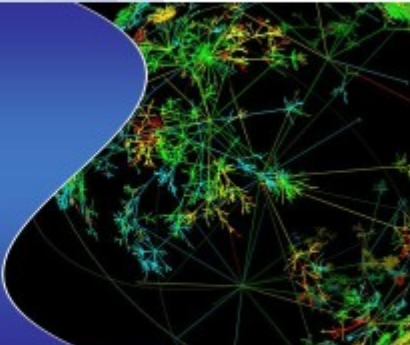


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FY 2008 Budget Priorities

2008
BUDGET
REQUEST

*Transformational Facilities
and Infrastructure*



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The slide features a dark purple background with a circular diagram of a gravitational wave detector. The diagram shows a central orange sphere (Earth) with two intersecting purple rings representing the detector's arms. Labels include 'AdvLIGO' in pink and 'LIGO' in red. The top left of the slide has the text 'National Facilities and Infrastructure' with icons for a folder, printer, mail, and document. The top right has '2008 BUDGET REQUEST' in white. A yellow box with the text 'Click on Text Version' is overlaid on the diagram.

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NSF Organization

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Education and
Human Resources

Directorate for
Social, Behavioral
And Economic Sciences

Directorate for
Engineering



CISE FY08 Budget Request

- ◆ Currently on a Continuing Resolution

Total	\$574M
Discovery	\$480.12M
Learning	\$47.23M
Research Infrastructure	\$39.08M
Stewardship	\$7.57M

CISE FY08 Budget Request

- ◆ Currently on a Continuing Resolution

GEO spends up to 43%

Total	\$574M
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PCAST Subcommittee on NIT Report, August 2007

- ◆ “...the most critical need is to rebalance the NITRD portfolio to include more long-term, large-scale, multidisciplinary NIT R&D and more visionary R&D.”
- ◆ Technical priorities:
 - ◆ NIT Systems connected with the physical world – cyber physical systems.
 - ◆ Software – critical issues in design and development.
 - ◆ Digital data –long-term preservation, stewardship and availability of data important to science and technology.
 - ◆ Networking –ongoing effort to produce a Federal Plan for Advanced Networking Research and Development, upgrade the Internet, address network security and reliability.

Interagency Task Force on Advanced Networking (ITFAN)

- ✦ ITFAN was charged by Dr. Marburger, President's Science Advisor, Director OSTP in January 2007
- ✦ Interim report was made available for web comment in August 2007
- ✦ NIT Subcommittee Co-chair stated in a presentation on April 24, 2007 that:
 - ✦ "US leadership in advanced networking is a strategic national priority."
- ✦ The interim report reports on 4 advanced networking stretch goals for 2015:
 - ✦ Provide network services anytime, anywhere
 - ✦ Make secure, global networks possible
 - ✦ Manage network complexity and heterogeneity
 - ✦ Foster innovation through development of advanced network systems and technologies
- ✦ Final report is due in 2008.

GENI



- ✦ Risks
 - ✦ Yes! Technical, financial, organizational, and social
- ✦ Blind to them
 - ✦ No!
- ✦ GPO is currently engaged in risk reduction activities, which have been defined in the planning phase as development and prototyping (D&P) and outreach to potential experimenters
- ✦ GSC is engaging multiple communities in requirements generation, i.e., the Research and Education Plan
- ✦ What is the transformational science that will be done on GENI that has never been done before?

Important Message

- ✦ CISE is engaged in developing transformational infrastructure
 - ✦ Today, all CISE infrastructure projects are funded at about 6% of our total budget, which is small compared to some other Directorates like GEO and MPS
 - ✦ CISE, like other directorates, is urged to identify the next generation of facilities
 - ✦ CISE is asked to advance the science of networks
 - ✦ Our ability – as a Nation -- to innovate, collaborate and compete in the future is tied up with the success of GENI

The Challenge of Working Across Boundaries

RAISING DUNCAN

By Chris Browne



Adapted from Sara Kiesler's NSF CISE Distinguished Lecture
June 12, 2003

Contact and URLs



- ◆ Suzi Iacono - siacono@nsf.gov
- ◆ NSF budget - www.nsf.gov;
<http://www.nsf.gov/about/budget/>
- ◆ NSF Strategic Plan - www.nsf.gov;
<http://www.nsf.gov/pubs/2006/nsf0648/nsf0648.jsp>
- ◆ PCAST Report - www.nitrd.gov;
<http://www.nitrd.gov/pcast/reports/PCAST-NIT-FINAL.pdf>
- ◆ ITFAN Interim Report - www.nitrd.gov;
<http://www.nitrd.gov/advancednetworkingplan/PDF/ITFAN-71907.pdf>