Agency NITRD Budgets by Program Component Area (PCA)

FY 2007 Budget Estimates
and
FY 2008 Budget Requests
(Dollars in Millions)

Agency		High End Computing Infrastructure & Applications (HEC I&A)	High End Computing Research & Development (HEC R&D)	Cyber Security & Information Assurance (CSIA)	Human-Computer Interaction & Information Management (HCI &IM)	Large Scale Networking (LSN)	High Confidence Software & Systems (HCSS)	Social, Economic, & Workforce Implications of IT (SEW)	Software Design & Productivity (SDP)	Total*
NSF	2007 Estimate	272.4	64.1	67.6	220.9	84.0	51.3	92.9	50.7	903.7
	2008 Request	**303.1**	**67.1**	**69.2**	**225.6**	**106.7**	**57.4**	**109.3**	**55.3**	**993.7**
OSD and DoD Service research orgs.		260.4	6.2	23.9	95.2	133.0	43.0		6.7	568.2
		234.1	**2.0**	**23.3**	**78.7**	**137.4**	**31.5**		**4.3**	**511.4**
NIH		132.5	1.8	1.2	199.6	67.0	8.4	12.2	2.9	425.6
		131.7	**1.8**	**1.2**	**194.5**	**65.4**	**8.2**	**11.9**	**2.9**	**417.6**
DARPA			89.6	93.4	198.6	38.2				419.9
			68.9	**96.9**	**204.3**	**42.4**				**412.5**
DOE/SC		210.0	51.9			43.4		3.5		308.8
		250.5	**67.0**			**47.3**		**5.0**		**369.8**
NSA			36.4	15.8		1.1	22.1			75.4
			60.3	**15.8**		**1.4**	**25.2**			**102.6**
NASA		63.4		0.3	9.5	3.1	5.0		2.0	83.3
		71.4		**0.3**	**8.0**	**1.5**	**3.5**		**2.0**	**86.7**
NIST		2.4	1.8	10.5	8.4	5.3	19.7		5.1	53.2
		2.4	**1.8**	**11.1**	**8.4**	**5.3**	**19.7**		**5.1**	**53.8**
AHRQ					44.9	5.0				49.9
					39.8	**5.0**				**44.8**
DOE/NNSA		10.4	25.9			1.6		5.0	2.9	45.8
		9.9	**17.9**			**1.2**		**4.8**		**33.8**
NOAA		16.4	1.9		0.5	2.9			1.6	23.3
		16.4	**1.9**		**0.5**	**2.9**			**1.6**	**23.3**
EPA		3.3			3.0					6.3
		3.3			**3.0**					**6.3**
NARA					3.5					3.5
					4.5					**4.5**
TOTAL (2007 Estimate)*		971.2	279.7	212.6	784.0	384.6	149.4	113.6	71.9	2,967
TOTAL (2008 Request)*		**1,022.8**	**288.6**	**217.7**	**767.3**	**416.5**	**145.6**	**131.0**	**71.3**	**3,061**

* Totals may not sum correctly due to rounding.

NITRD Program Budget Analysis

Fiscal Year Overview for 2007-2008

Differences between the President's Budget request for a given year and estimated spending for that year reflect revisions to program budgets due to evolving priorities, as well as Congressional actions and appropriations. In addition, the National Archives and Records Administration (NARA) joined the NITRD Program and is included in the budget table. Further, agencies have continued to work collectively on improving the PCA definitions, as reflected by changes in the definitions outlined in OMB Circular A-11, and individually on improving the classification of investments within the PCAs, resulting in changes in NITRD Program budgets.

2007 Summary

The 2007 NITRD estimate of $2.967 billion is $0.107 billion, or approximately 3 percent, less than the $3.074 billion 2007 President's budget request.[1] The overall change is due to both decreases and increases in individual agency NITRD budgets, which are described below.

2008 Summary

The President's 2008 budget request for the NITRD Program is $3.061 billion, an increase of $0.094 billion, approximately 3 percent, over the 2007 estimate. Contributors to this change are NITRD Program budget increases at DOE/SC, NSA, and NSF, partially offset by decreases within DoD (OSD and DoD Service research organizations), which are explained below, and the addition of NARA. The Administration continues to focus NITRD Program funding increases on the three agencies – DOE/SC, NIST, and NSF – that are part of the American Competitiveness Initiative. The combined 2008 budget request for those three agencies is $151.6 million higher than 2007 spending estimates, an increase of 12 percent.

NITRD Program Budget Analysis by Agency

This section describes changes greater than $10 million either between 2007 requested funding and 2007 estimated spending or between 2007 estimated spending and 2008 requests. Smaller changes are discussed only if they represent shifts in funding focus. Budget numbers are rounded to the nearest million in these descriptions and may result in minor discrepancies in sums due to rounding.

NSF

Comparison of 2007 estimate ($904 million) and 2008 request ($994 million): The 2008 budget request for NSF includes planned investment increases in all of the NITRD PCAs. These include an additional $31 million for HEC I&A, $23 million for LSN, and $16 million for SEW. Increased HEC I&A funding from NSF's Office of Cyberinfrastructure will support software and services for complex science and engineering, including petascale application development as well as support for operations and maintenance of HEC systems, while additional investments from NSF's Mathematical and Physical Sciences Directorate and its Engineering Directorate will support grid computing and other centers and facilities as well as modeling, simulation, analysis, and other applications in several domains. LSN increases will support additional advanced networking research, including NSF's GENI program. The added funding in SEW will provide increases in NSF's Broadening Participation in Computing program and the initiation of an International Workforce effort.

OSD and DoD Service Research Organizations

Comparison of 2007 request ($498 million) and 2007 estimate ($568 million): The 2007 estimate for OSD and the DoD Service research organizations is higher ($70 million) than the request of $498 million due to Congressional add-ons that affect HEC I&A, CSIA, HCI&IM and HCSS.

[1] The 2007 request figures in this analysis are those reported in the *NITRD 2007 Supplement to the President's Budget.*

Comparison of 2007 estimate ($568 million) and 2008 request ($511 million): The 2008 request for OSD and the DoD Service research organizations is $13 million above the 2007 request but below the 2007 estimate because Congressional add-ons from 2007 are not included in the 2008 request.

NIH

Comparison of 2007 request ($491 million) and 2007 estimate ($426 million): The $65 million decrease is due to the Continuing Resolution that provided less than the full request, resulting in NIH delaying some HEC I&A, HCI&IM, and SDP activities until 2008.

DARPA

Comparison of 2007 request ($466 million) and 2007 estimate ($420 million): The $46 million decrease is the result of Congressional reductions to the President's budget request for HEC R&D and HCI&IM and additional DARPA-imposed HEC R&D reductions due to restructuring of the HPCS program's funding profile to reflect contract requirements; these reductions are partially offset by an increase in LSN funding. The change also reflects a $12 million re-labeling of funding from HEC R&D to CSIA to better match the PCA definitions.

Comparison of 2007 estimate ($420 million) and 2008 request ($413 million): The decrease of $7 million is the result of a decrease of $21 million in HEC R&D due to the HPCS restructuring, partially offset by increases in several other PCAs.

DOE/SC

Comparison of 2007 request ($345 million) and 2007 estimate ($309 million): The $36 million decrease is due to the Continuing Resolution that provided less than the full request, resulting in DOE delaying upgrades to capacity HEC facilities, extending leases for Leadership Computing facilities, and delaying SciDAC partnership activities until 2008. There is also a $105 million shift in funding from HEC R&D to HEC I&A, which reflects a reclassification of DOE/SC's Leadership Computing Facility expenditures as they evolve from research to production.

Comparison of 2007 estimate ($309 million) and 2008 request ($370 million): The $61 million increase is almost wholly due to increases in HEC I&A and HEC R&D, including increased investments in SciDAC applications partnerships, advanced prototypes focused on power-efficient designs that complement HPCS, basic computer science research to enable petascale computers, and applied mathematics research for algorithms for petascale computing.

NSA

Comparison of 2007 request ($118 million) and 2007 estimate ($75 million): The decrease of $43 million is due to a decrease of $26 million in HEC R&D and a decrease of $18 million in HCSS, both of which are the result of actions taken by Congress.

Comparison of 2007 estimate ($75 million) and 2008 request ($103 million): The $28 million increase results mainly from an increase of $24 million in HEC R&D, due to NSA's participation in the DARPA HPCS Phase 3 program.

NIST

Comparison of 2007 request ($43 million) and 2007 estimate ($53 million): Increases are shown primarily in the HCSS PCA, and reflect ongoing activities that have been reclassified as NITRD spending.

AHRQ

Comparison of 2007 request ($57 million) and 2007 estimate ($50 million): LSN funding decreased due to completion of AHRQ Data Standards Program grants. New grants in health-care IT focused on different areas, resulting in an increase in HCI&IM funding that offset some of the decrease. Other funding has shifted into non-IT-related patient safety and quality of care programs, resulting in a net reduction in estimated spending relative to the 2007 budget request.

DOE/NNSA

Comparison of 2007 estimate ($46 million) and 2008 request ($34 million): DOE/NNSA determined that its software design and development investments were more closely related to high-end computing, and has shifted reporting of those investments from the SDP PCA to the HEC R&D PCA. The $12 million decrease is due to reductions in HEC R&D in advanced architecture and systems software development, which are partially offset by the shift in funding from SDP.

NARA

NARA joined the NITRD Program effective with the 2008 budget request.

NITRD Program Budget Summary by PCA

Using the information presented above, this section provides an analysis of the NITRD Program budget by PCA, summarizing the more substantial differences between 2007 requested funding and 2007 estimated spending and between 2007 estimated spending and 2008 requests.

HEC I&A

Comparison of 2007 request ($884 million) and 2007 estimate ($971 million): The $87 million increase is almost wholly due to increases of $74 million at OSD and DoD Service research organizations and $75 million at DOE/SC, offset by a decrease of $62 million at NIH. These changes are described above.

Comparison of 2007 estimate ($971 million) and 2008 request ($1.023 billion): The $52 million increase is primarily the combined result of increases of $31 million at NSF and $41 million at DOE/SC, partially offset by a decrease of $26 million at OSD and the DoD Service research organizations. These changes are described above.

HEC R&D

Comparison of 2007 request ($440 million) and 2007 estimate ($280 million): The $160 million decrease is primarily the result of decreases of $28 million at DARPA, $109 million at DOE/SC, and $26 million at NSA, which are described above.

Comparison of 2007 estimate ($280 million) and 2008 request ($289 million): The $9 million increase is primarily a combination of increases of $15 million at DOE/SC and $24 million at NSA and decreases of $21 million at DARPA and $8 million at DOE/NNSA. These changes are described above.

CSIA

Comparison of 2007 request ($176 million) and 2007 estimate ($213 million): The $37 million increase is almost wholly due to increases of $23 million at OSD and the DoD Service research organizations and $12 million at DARPA, which are described above.

HCI&IM

Comparison of 2007 request ($825 million) and 2007 estimate ($784 million): The $41 million decrease is almost wholly due to decreases of $40 million at OSD and the DoD Service research organizations and $35 million at DARPA, partially offset by increases of $16 million at NIH and smaller increases at AHRQ and other agencies. These changes are discussed above.

Comparison of 2007 request ($784 million) and 2008 request ($767 million): The $17 million decrease is due to a decrease of $17 million at OSD and the DoD Service research organizations, described above, and smaller increases and decreases at other agencies that offset each other.

LSN

Comparison of 2007 request ($405 million) and 2007 estimate ($385 million): The $20 million decrease is almost wholly due to decreases of $8 million at NIH and $15 million at AHRQ, partially offset by increases at several other agencies. The changes at NIH and AHRQ are described above.

Comparison of 2007 estimate ($385 million) and 2008 request ($417 million): The $32 million increase is due to increases of $23 million at NSF and $4 million at DARPA and smaller increases at several other agencies. The changes at NSF, DARPA, and AHRQ are discussed above.

HCSS

Comparison of 2007 request ($145 million) and 2007 estimate ($149 million): While the 2007 request and the 2007 estimate are approximately level, two agencies had substantial increases and one had a substantial decrease. OSD and the Service research organizations had a $14 million increase; NIST had a $10 million increase; and NSA had an $18 million decrease. The changes at these agencies are described above.

Comparison of 2007 estimate ($149 million) and 2008 request ($146 million): The $3 million decrease is the combination of a decrease of $12 million at OSD and DoD Service research organizations and increases at several other agencies. The change at OSD and DoD Service research organizations is described above.

SEW

Comparison of 2007 request ($114 million) and 2008 request ($131 million): The $17 million increase is due almost entirely to a $16 million increase at NSF, described above.

SDP

Comparison of 2007 request ($86 million) and 2007 estimate ($72 million): The decrease of $14 million is primarily due to a decrease of $15 million at NIH. DOE/NNSA also reclassified programs from SDP to HEC R&D, as described above.