

National Telecommunications and Information Administration

Resource Requirements Summary

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(Dollars in thousands. Funding amounts reflect total obligations.)

Information Technology (IT)

Full-Time Equivalent (FTE)

	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	Increase/ Decrease	FY 2005 Request
	Actual	Actual	Actual	Estimate	Estimate	Base		
Salaries & expenses	\$28,795	\$30,748	\$33,174	\$40,273	\$50,881	\$52,941	\$7,000	\$59,941
Domestic and international policies	3,720	3,783	4,300	4,364	4,597	4,817	1,000	5,817
Spectrum management	17,757	19,307	19,035	23,243	32,440	33,975	2,000	35,975
Telecommunication sciences research	7,318	7,658	9,839	12,666	13,844	14,149	4,000	18,149
Public Telecommunications Facilities, Planning, and Construction	27,492	44,188	47,592	49,834	2,538	2,538	0	2,538
Grants	25,768	42,011	45,399	46,849	0	0	0	2,538
Program management	1,724	2,177	2,193	2,985	2,538	2,538	0	2,538
Information Infrastructure Grants	17,720	46,206	15,486	18,969	0	0	0	0
Grants	13,898	42,933	12,414	15,500	0	0	0	0
Program management	3,822	3,273	3,072	3,469	0	0	0	0
Total funding	74,007	121,142	96,252	109,076	53,419	55,479	7,000	62,479
Direct	56,226	101,774	77,147	84,034	21,407	22,239	5,400	27,639
Reimbursable 2	17,781	19,368	19,105	25,042	32,012	33,240	1,600	34,840
IT funding 1	4,500	5,400	5,400	5,400	5,400	5,400	0	5,400
FTE	246	244	244	301	279	283	4	287

1 IT funding included in total funding

2 Reimbursable funding included in total funding

	FY 2000 Actual	FY 2001 Actual	FY 2002 Actual	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Base	Increase/ Decrease	FY 2005 Request
Performance Goal 1: Increase competition within the telecommunications sector and universal access to telecommunication services for all Americans								
Salaries & expenses	\$3,634	\$3,688	\$4,179	\$4,254	\$4,475	\$4,690	\$1,000	\$5,690
Domestic and international policies	3,634	3,688	4,179	4,254	4,475	4,690	\$1,000	\$5,690
Spectrum management	0	0	0	0	0	0	0	0
Telecommunication sciences research	0	0	0	0	0	0	0	0
Total funding	3,634	3,688	4,179	4,254	4,475	4,690	\$1,000	\$5,690
IT funding 1	1,500	1,500	1,500	1,500	1,500	1,500	0	1,500
FTE	26	25	27	36	36	36	4	40

Performance Goal 2: Efficient and effective allocation of radio spectrum

Salaries & expenses	19,800	21,472	23,444	27,589	38,591	40,436	6,000	46,436
Domestic and international policies	86	95	121	110	122	127	0	127
Spectrum management	17,757	19,307	19,035	23,243	32,440	33,975	2,000	35,975
Telecommunication sciences research	1,957	2,070	4,288	4,236	6,029	6,334	4,000	10,334
Total funding	19,800	21,472	23,444	27,589	38,591	40,436	6,000	46,436
IT funding 1	2,400	3,200	3,200	3,200	3,200	3,200	0	3,200
FTE	135	133	141	150	163	167	10	177

Performance Goal 3: Ensure broader availability, and support new sources, of advanced telecommunications and information services

Salaries & expenses	5,361	5,588	5,551	8,430	7,815	7,815	0	7,815
Domestic and international policies	0	0	0	0	0	0	0	0
Spectrum management	0	0	0	0	0	0	0	0
Telecommunication sciences research	5,361	5,588	5,551	8,430	7,815	7,815	0	7,815
Public Telecommunications Facilities, Planning, and Construction	27,492	44,188	47,592	49,834	2,538	2,538	0	2,538
Grants	25,768	42,011	45,399	46,849	0	0	0	0
Program management	1,724	2,177	2,193	2,985	2,538	2,538	0	2,538

Information Infrastructure Grants			17,720	46,206	15,486	18,969	0	0	0	0
Grants			13,898	42,933	12,414	15,500	0	0	0	0
Program management			3,822	3,273	3,072	3,469	0	0	0	0
Total funding			50,573	95,982	68,629	77,233	10,353	10,353	0	10,353
IT funding 1			600	700	700	700	700	700	0	700
FTE			85	86	76	115	80	80	(10)	70

Skill Summary

NTIA employs policy analysts with legal, economics, and technical skills to perform these activities. NTIA does not have a separate budget category for these activities.

Targets and Performance Summary

Performance Goal 1: Increase competition within the telecommunications sector and universal access to telecommunication services for all Americans (supports DOC Strategic Goal 2 Foster Science and Technological Leadership by protecting intellectual-property, enhancing technical standards and advancing measurement science, and General Goal/Objective 2.3, “Advance the development of global e-Commerce and enhanced telecommunications and information services”)

	FY 2000	FY 2001	FY 2002	FY 2003 Target	FY 2004 Target	FY 2005 Target
Provide the policy framework for introduction of new technologies: See rationale for performance goal for explanation			New	Policy Successes	Policy Successes	Policy Successes
Policy Customer Survey	New	New	New	50 customers	50 customers	50 customers

Explanation: One of the National Telecommunications and Information Administration’s (NTIA’s) primary missions is to serve as the President’s principal policy advisor on telecommunications and information issues and to be the Administration’s primary voice on them. NTIA fulfills this policy-setting role in a number of ways: by preparing and issuing special reports on topics that emerge over time; testifying before Congress and other organizations that are concerned with telecommunications policy; providing the Administration’s views on actions proposed by the Federal Communications Commission; issuing requests for public comment on specific issues; and encouraging dialogue with the private sector through sponsorship and participation in conferences, workshops, and other forums.

NTIA will continue to examine an array of spectrum management policy issues in FY 2005 dealing with innovative approaches to spectrum management and the effectiveness of current processes. This examination will be conducted in tandem with the FCC’s proceedings on spectrum management policy, in which NTIA will participate on behalf of the Administration and as part of the President’s Spectrum Management Policy Initiative. NTIA also will participate on behalf of the Administration in FCC and Congressional proceedings on telecommunications policies, including the development of appropriate regulatory treatment for broadband services deployment. A number of Internet related policy issues will require NTIA action, including ICANN reform and continuing Internet privatization, domain name management both domestically and internationally, proposals to regulate Internet services and content, and the combination of Internet and telecommunications addressing (ENUM). NTIA will pursue policies promoting international trade in telecommunications products and services, promoting consistent international approaches to telecommunications policies, and improving relations with Western Hemisphere neighbors. All of these activities will require substantial coordination among NTIA’s program offices, as well as interagency coordination to develop the Administration’s positions.

Increases:

Spectrum Management - Incentives and Fees

	2005 Base		2005 Estimate		Increase/ (Decrease)	
	Personnel	Amount	Personnel	Amount	Personnel	Amount
Pos/BA	0	0	5	1,000	5	1,000
FTE/Obl.	0	0	4	1,000	4	1,000

Performance measures: NTIA’s policy-related activities are among the agency’s most visible and have the greatest impact on consumers and industries both domestically and internationally. While the outcomes of these activities are difficult to quantify, NTIA management plans for multi-year efforts in a number of areas. NTIA’s FY 2002 most significant accomplishments – providing spectrum for 3G and ultrawideband services, the .us transfer and a revised ICANN MOU, for instance – are the culmination of several years’ of analysis, planning, and coordination within the government. Similarly, FY 2003 and 2004 provide the basis for continuing activities in FY 2005 and beyond. The customer surveys in FY 2003, 2004, and 2005, will measure Administration customer perceptions of NTIA’s policy priorities, the timeliness of its activities in support of those priorities, and the inclusiveness of NTIA’s policy activities. Customers that will be surveyed include the White House, the State Department, other federal agencies, the Technology Administration, the International Trade Administration, and the Office of the Secretary within the Department of Commerce. NTIA intends to survey at least 50

customers on its policy-related activities. The results of the survey will be used to assess NTIA's policy priorities and to determine whether improvements in interagency consultation and coordination can be made. No changes in performance measures have been made.

Program Evaluation

NTIA management reviewed and assessed policy and program priorities in the development of FY 2004 and 2005 budgets. The results of the FY 2002 spectrum summit, for instance, have led to the development of a series of spectrum management reform priorities and objectives to be pursued in FY 2003, 2004, and 2005. Similarly, the broadband summit and ENUM roundtable served to inform NTIA with state and local government views as well as those of consumers and industry. NTIA also meets regularly with DOC management in the development of appropriate policy priorities.

Cross-cutting Activities

Intra-Department of Commerce

NTIA supports the Secretary of Commerce on a broad range of telecommunications policy issues. NTIA works with the International Trade Administration on international issues, the Economics and Statistics Administration on Internet penetration and use measurements and analysis and with the Technology Administration on domain name and technology policy issues.

Other Government Agencies

NTIA works with the White House and other federal agencies to develop and coordinate Administration-wide policy statements. NTIA serves as the manager of federal government spectrum while the Federal Communications Commission (FCC) manages the non-federal spectrum. Since spectrum is often shared, NTIA and the FCC regularly engage in coordination of spectrum uses and spectrum policies.

Government/Private Sector

NTIA obtains private-sector views on a broad range of telecommunications and information policy issues through formal proceedings in which public comments are solicited and through public conferences, workshops, and meetings on specific subjects.

External Factors and Mitigation Strategies

Consideration of telecommunications and information policy issues is affected by the activities of independent regulatory agencies (such as the Federal Communications Commission and the Federal Trade Commission) and by priorities established for NTIA by the Secretary of Commerce, the White House, and Congress. Rapid developments in the Internet and telecommunications industries, along with supporting technologies, sometimes makes it difficult for government institutions to coordinate timely policy responses to issues as they arise. Regular interagency meetings on policy issues will assist in the development of timely Administration positions.

Performance Goal 2: Efficient and effective allocation of radio spectrum (supports DOC Strategic Goal 2 Foster Science and Technological Leadership by protecting intellectual-property, enhancing technical standards and advancing measurement science, and General Goal/Objective 2.3, "Advance the development of global e-Commerce and enhanced telecommunications and information services")									
				FY 2000	FY 2001	FY 2002	FY 2003 Target	FY 2004 Target	FY 2005 Target
Timeliness of Processing				New	New	New	Fifteen Business Days	Twelve Business Days	Eleven Business Days
Percentage of Requests Accomplished Online				New	New	New	95%	95%	95%
Completeness and Accuracy of Agency Assignment Request				New	New	New	85% complete 1 st time	90% complete 1 st time	91% complete 1 st time
Customer Satisfaction Survey on Training Course				New	New	New	90% Satisfactory or Better	90% Satisfactory or Better	90% Satisfactory or Better

Explanation: The availability of the radio frequency spectrum is key to the development and implementation of innovative telecommunications technologies such as Ultra wideband (UWB) and Third Generation (3G) wireless services. The National Telecommunication and Information Administration's (NTIA's) spectrum management activities are therefore intertwined with its policy activities in that existing uses of spectrum by both the private and federal sectors must be examined to determine where spectrum will be made available for new and innovative spectrum-using services that provide benefits to all consumers. Recent examples include actions to provide spectrum for 3G and ultra wideband wireless services. NTIA's activities include (1) identifying and supporting new wireless technologies that promise innovative applications for customers of the federal and private sectors; (2) providing the 56 federal agencies with the spectrum needed to support their missions for national defense, law enforcement and security, air traffic control, national resource management, and other public safety services; (3) developing plans and policies to use the spectrum effectively; (4) satisfying the United States' future spectrum needs globally through participation with the 190 other countries of the International Telecommunication Union in establishing binding treaty agreements through world radio-communication conferences; (5) improving, through telecommunications research and engineering, the understanding of radio-wave transmission and thereby improving spectrum utilization and the performance of radio-communications systems; and (6) supporting and implementing the President's Spectrum Management Policy Initiative.

Increases:

International Spectrum Management

Appropriation		2005 Base		2005 Estimate			Increase/ (Decrease)	
		Personnel	Amount	Personnel	Amount		Personnel	Amount
Appropriation	Pos/BA	2	400	2	400	2	400	
	FTE/Obl.	2	400	1	400	1	400	
Reimbursable								
	Pos/BA	8	1,600	8	1,600	8	1,600	
	FTE/Obl.	6	1,600	6	1,600	6	1,600	

Performance measures: NTIA has made substantial improvements over the years in the time required to process frequency assignment actions requested by the federal agencies. This measure will permit NTIA to continue to track improvements in processing time through further automation procedures and logistical procedures. The percentage of requests accomplished online will demonstrate the effectiveness of a new, secure, web-based interface for federal agencies to request frequency assignment actions entirely online. Processing spectrum requests by paper can be a slow and ineffective way of getting assignments out to customers. Currently, NTIA process 4,000 to 10,000 paper requests per month. NTIA's long-term goal is to have 100% of frequency assignment actions handled entirely online. This goal will be met in out years as a result of long term investments currently underway. One way to determine whether NTIA is adequately serving its customers in the spectrum management process is by examining the clarity and ease of use of procedures for customers to file an action request. This measure will indicate whether customers are able to file requests completely and accurately and whether improvements in the customer interface are needed. NTIA's Office of Spectrum Management conducts a number of spectrum management training seminars each year for federal spectrum managers and for representatives from foreign administrations. This measure will determine whether the seminar content continues to be useful to participants and whether changes to the curriculum are warranted. The FY 2004 and 2005 targets may be changed in light of prior customer survey results. Typically, customer surveys do not yield results much greater than 90% Satisfactory or better. No changes in performance measures have been made.

Program Evaluation

NTIA management reviewed and assessed policy and program priorities in the development of FY 2004 and 2005 budgets. In addition, NTIA convened a spectrum summit in FY 2002 to begin an inquiry on how to better manage and allocate this finite resource among competing uses. This ongoing inquiry will yield information about new and innovative ideas for spectrum policy and management that encourage spectrum efficiency; that provide spectrum for new technologies; and that improve the effectiveness of the domestic and international spectrum management process. To meet its current obligations and to address improvements, NTIA's spectrum management functions will continue to consume the largest share of agency resources.

Cross-cutting Activities**Intra-Department of Commerce**

NTIA participates with the Technology Administration and National Oceanic and Atmospheric Administration within the Department of Commerce on the Interagency GPS Executive Board, which with DOD jointly manages the GPS satellite program as a national asset.

Other Government Agencies

NTIA authorizes spectrum assignments for 56 federal government agencies to operate radio-communications systems. NTIA works with the 23 other major spectrum using federal agencies on IRAC to manage frequency assignment requests. NTIA represents the interests of 33 other agencies on the IRAC. NTIA serves as the manager of federal government spectrum while the Federal Communications Commission (FCC) manages the non-federal spectrum. Since spectrum is often shared, NTIA and the FCC regularly engage in coordination of spectrum uses and

spectrum policies. Uses of shared frequency bands are coordinated with the FCC. International bodies, in which NTIA participates as the U.S. representative, establish permissible uses of frequency bands. In FY 2002, NTIA initiated discussions with the FCC and the State Department to develop an action plan to facilitate the efficient functioning of the nation's spectrum management team at home and abroad. NTIA will lead and participate in a high-level inter-agency task force as part of its support for the President's Spectrum Management Policy Initiative. The recommendations of the Task Force will have a substantial impact on FY 2005 activities.

Government/Private Sector

NTIA coordinates on spectrum management issues through advisory committees and special information-sharing initiatives. Information on these activities may be found at <http://www.ntia.doc.gov/osmhome/osmhome.html>.

External Factors and Mitigation Strategies

Congress, from time to time, has required some changes in federal use of radio frequency spectrum, which can affect availability of frequencies to suit federal needs. The speed of development and implementation of wireless technologies will affect the level and type of demand by federal agencies for certain frequencies. The Federal Communications Commission initiates numerous spectrum-related proceedings in which NTIA participates on behalf of the Administration.

Performance Goal 3: Ensure broader availability, and support new sources, of advanced telecommunications and information services (supports DOC Strategic Goal 2 Foster Science and Technological Leadership by protecting intellectual-property, enhancing technical standards and advancing measurement science, and General Goal/Objective 2.3, "Advance the development of global e-Commerce and enhanced telecommunications and information services")

	FY 2000	FY 2001	FY 2002	FY 2003 Target	FY 2004 Target	FY 2005 Target
Digital Broadcasting Conversion	New	New	New	40 grants	0 grants	0 grants
Quality of Basic Research as Reflected in Peer-reviewed Publications	New	New	New	5 Publications	6 Publications	7 Publications
Level of Technology Transfer Activities Conducted with the Private Sector through the Cooperative Research and Development Agreements	New	New	New	3 Cooperative Research and Development Agreements	3 Cooperative Research and Development Agreements	3 Cooperative Research and Development Agreements

Explanation: In addition to its policy-related activities, the National Telecommunications and Information Administration (NTIA) supports innovative telecommunications and information technologies through basic research performed at its laboratory, the Institute for Telecommunication Sciences (ITS). ITS performs extensive basic research on quality of digital speech, audio and video compression, and transmission characteristics. This research has the potential to improve both the performance of telecommunications networks and the availability of digital content on the Internet. Basic research at ITS also supports U.S. positions in international standard-setting bodies and NTIA's development of Administration policies related to the introduction of new technologies, such as ultra wideband (UWB) and third generation (3G) wireless services.

Increases:

Interference Temperature and Radio Noise Research

	2005 Base		2005 Estimate		Increase/ (Decrease)	
	Personnel	Amount	Personnel	Amount	Personnel	Amount
Pos/BA	0	0	4	2,000	4	2,000
FTE/Obl.	0	0	3	2,000	3	2,000

General Lab Upgrade

	2005 Base		2005 Estimate		Increase/ (Decrease)	
	Personnel	Amount	Personnel	Amount	Personnel	Amount
Pos/BA	0	0	0	2,000	0	0
FTE/Obl.	0	0	0	2,000	0	0

Performance measures: NTIA will measure the quality of basic research programs by the number of peer-reviewed articles that are published in technical journals and publications. This measure will indicate the reception and utility of research results within the spectrum research and engineering community. The Technology Transfer Act of 1986 (TTA) allows Federal laboratories to enter into cooperative research agreements with private industry, universities, and other interested parties. The law was passed in order to provide laboratories with clear legal authority to enter into these arrangements and thus encourage technology transfer from Federal laboratories to the private sector. Under this Act, a cooperative research and

development agreement (CRADA) can be implemented that protects proprietary information, grants patent rights, and provides for user licenses to corporations, while allowing Government expertise and facilities to be applied to interests in the private sector. CRADAs are the principal means of aiding the private sector through ITS's spectrum research and engineering activities. This measure will provide an indication of the utility of these activities to the private sector. There are no changes in the FY 2003 and 2004 measures. The publications measure for FY 2005 is increased by one publication to reflect the additional research opportunities afforded by the Radio Interference Temperature Initiative.

Program Evaluation

NTIA management reviewed and assessed policy and program priorities in the development of FY 2004 and 2005 budgets. As a result, ITS research will focus on supporting those spectrum management reform activities undertaken in NTIA's policy development (see Goal 1 above.)

Cross-cutting Activities

ITS works with a broad array of governmental agencies as customers for its telecommunications and information systems expertise.

Intra-Department of Commerce

ITS supports NTIA's policy-related activities by providing empirical analysis. ITS also supports NTIA's spectrum management activities through spectrum occupancy measurements and other technical support activities.

Other Government Agencies

ITS conducts research under contract for a wide variety of federal agencies, including the White House National Communications Agency, the Departments of Defense and Transportation.

Government/Private Sector

ITS conducts extensive technology transfer activities through CRADAs with private sector entities.

External Factors and Mitigation Strategies

The number of projects that ITS can conduct is limited by the availability of scientific and technical staff and the availability of funding through other government agencies, including NTIA.

Unit Cost Measures: During FY 2004, NTIA will begin development for use in FY 2005 of unit cost measures for its spectrum assignments. Otherwise, NTIA's policy-related activities are not amenable unit cost analysis. Policy activities do not lend themselves to quantitative measures.

PART: None of NTIA's programs have yet been evaluated through a PART assessment.

NTIA Data Validation and Verification: NTIA reviews performance data to ensure that it is complete and accurate. There were no significant deviations from projected targets. The actual validation process is conducted following similar to audit principles including sampling and verification of data. Unclassified spectrum management data is published and distributed on CD-ROM and has been examined for accuracy by the Department's Inspector General and the General Accounting Office (GAO). Grant information is verified by the Department's Office of Financial Assistance and published on the NTIA website. Additionally, documentation is reviewed and a determination is made on its adequacy and sufficiency to support claims that outcomes and outputs have been achieved.

Performance Measure	Data Source	Frequency	Data Storage	Verification	Data Limitations	Actions to be Taken
Measure: Provide the policy framework for introduction of new technologies	Activities are reflected on NTIA website; weekly reports to the Secretary of Commerce; annual report to Congress	Annual	Office of Policy Coordination and Management	Inspection	Data is not quantitative but rather a qualitative assessment of current policy directions and plans.	None
Measure: Policy Customer Survey	Customer surveys	Annual	Office of Policy Coordination and Management	Inspection	A survey of 50 federal customers should yield useful results for program planning and evaluation. The sample size will be examined in light of experience with the FY 2003 survey.	Develop survey methodology and conduct survey
Measure: Timeliness of Processing	Interdepartment Radio Advisory Committee (IRAC) Support Branch, Office of Spectrum Management (OSM)	Weekly, monthly, annually	Computer Services Division, OSM	Automated Data Processing (ADP) routines	Classified information is not included in public data	Collection of data
Measure: Percentage of Requests Accomplished Online Measure: Completeness and Accuracy of Agency Assignment Request	IRAC Support Branch, OSM	Annual	Computer Services Division, OSM	ADP routines (measures 2b & 2c) and manual inspection (2c)	Classified information is not available to public.	Collection of data
Measure: Customer Satisfaction Survey on Training Course	OSM	Every course conducted	OSM	Manual inspection	None	Develop survey
Measure: Peer-reviewed publications	ITS	Annual	ITS	Manual inspection	None	Collection of data
Measure: CRADAs	ITS	Annual	ITS	Manual inspection	None	Collection of data