National Telecommunications and Information Administration

Mission Statement

The National Telecommunications and Information Administration (NTIA) advises the President on domestic and international communications policy, manages the federal government's use of the radio frequency spectrum, and performs research in telecommunications sciences.

NTIA's major responsibilities fall in the radio frequency spectrum management and communications policy arena. NTIA is the manager of the federal government's use of spectrum. NTIA is also the President's advisor on communications policy matters. NTIA is frequently asked by both the Administration and Congress to conduct studies of key policy issues.

In conjunction with the State Department and the Federal Communications Commission (FCC), NTIA represents the United States' interests on communications issues abroad. NTIA participates in a variety of international forums, such as the International Telecommunication Union, the Organization for Economic Cooperation and Development, the Asia-Pacific Economic Cooperation, and the Inter-American Telecommunications Commission. NTIA also participates in direct bilateral and multilateral negotiations with key strategic nations.

NTIA plays a major role in the continued successful functioning of the Internet through its contractual relationship with the Internet Corporation for Assigned Names and Numbers (ICANN), the private sector entity responsible for management of the Internet domain name system. NTIA is also involved in the management of .us, the U.S.'s country code top-level domain (TLD), through its contractual relationship with NeuStar, the new operator of the TLD.

The Institute for Telecommunication Sciences (ITS) is NTIA's chief research and engineering arm, and also serves as a principal federal resource for solving the telecommunications concerns of other federal agencies, state and local governments, and private associations and organizations.

NTIA's Public Telecommunications Facilities Program (PTFP) provides grants through a competitive process to help public broadcasting stations, state and local governments, Indian tribes, and nonprofit organizations construct facilities to bring educational and cultural programming to the American public.

NTIA currently is the lead agency for the communications and information sector to help private industry ensure that the critical communications networks remain functioning in the face of a cyber or physical attack.

Priorities/Management Challenges

NTIA's priorities are to promote competition and remove regulatory impediments to the development of new technologies, to promote international trade in telecommunications products and services, to identify and promote new wireless technologies and spectrum efficiencies, and to perform basic research on telecommunications technology. The major challenge for NTIA in the spectrum management area is to meet the ever-growing demands for spectrum by both the public and private sectors. This ultimately will involve significant changes in spectrum management practices, both in the U.S. and worldwide. A major portion of NTIA's resources is devoted to this challenge.

FY 2002 Performance

In the communications and information policy area, NTIA worked with regulators, industry, and consumers to promote broadband deployment, local competition, and universal access by removing regulatory and economic barriers to growth. NTIA promoted market-opening, competition-based U.S. telecom policy before international governing bodies and in international telecom forums. NTIA continued to promote effective privatization of the Internet domain name system (DNS) management functions through contractual arrangements with ICANN. NTIA extended for one year its Memorandum of Understanding (MOU) with ICANN, though expressed disappointment that ICANN's progress on the MOU tasks thus far has moved so slowly. The agreement to extend the MOU came at the end of a thorough examination of ICANN's performance of its transition responsibilities to date, as well as of ICANN's ongoing reform efforts.

NTIA awarded a contract to NeuStar for management of the .us TLD, greatly expanding eligibility requirements for acquiring names in that domain space. NTIA has initiated a notice and comment proceeding to evaluate whether currently-available Internet blocking and filtering technology measures adequately address the needs of educational institutions, and to evaluate the effectiveness of children's Internet safety policies. A report on the subject will be issued in FY 2003.

In August, NTIA hosted a roundtable to address issues relating to the convergence of communications technologies, including the Telephone Number Mapping (ENUM) Protocol. The ENUM Protocol creates a single identifier based on a user's public telephone number that could be used across various communications networks.

NTIA and the Economics and Statistics Administration published *A Nation Online: How Americans Are Expanding Their Use Of The Internet*. The data in this study are among the most broad-based and reliable datasets that have been gathered on Internet, broadband, and computer connectivity.

NTIA awarded $36 million in PTFP grants to assist 97 public broadcasting stations across the country complete federally mandated conversions to digital technology. An additional $6 million in PTFP grants were awarded for public radio, distance learning, and replacement of television equipment. The grants will be matched by more than $74 million in funds raised by the recipients.

In the area of spectrum management reform policies, NTIA worked with the FCC, State Department, and international spectrum managers to reform spectrum management; it worked with Congress to enact spectrum relocation fund legislation. NTIA also worked with other executive branch agencies, the FCC, and industry to propose internal and external market oriented spectrum reform. NTIA coordinated with the FCC on Ultra wideband technologies to achieve a balanced approach to promote innovation, stimulate economic growth, create jobs, and enhance public safety. Culminating efforts begun in FY 2000, NTIA released a plan in July that concluded that 90 MHz of radio spectrum could be made available in the future for advanced wireless (third generation, or "3G") telecommunications services to meet the anticipated demand for new wireless services. In a related proceeding, NTIA developed rules formalizing reimbursement procedures for new licensees to compensate federal agencies that relocate their operations to make frequency spectrum available for commercial use by auction.

NTIA hosted a Spectrum Management Summit in April to help identify the best solutions to challenges posed by management of the nation's airwaves. In June, NTIA hosted the "Current and Emerging Solutions to Public Safety Communications Interoperability Summit" to assess public safety communications issues. NTIA published the reports *Current and Future Spectrum Use by the Energy, Water, and Railroad Industries* and *Alternative Frequencies for Use by Public Safety Systems*.

In FY 2002, NTIA had two goals and two measures. NTIA's policy-related activities were not covered by measures in FY 2002 (measures have been developed for policy activities in the FY 2004 APP). Of those two measures, NTIA met one and made substantial progress toward meeting the other. NTIA spectrum management operations processed 104,830 frequency assignment actions, reflecting greatly increased levels of operation as it worked 24 hours a day, 7 days a week for several months to support federal, state, and local public safety agencies in the wake of the September 11 tragedies. NTIA's role awarding grants through the Technology Opportunities Program (TOP) benefits non-profit organizations, and state and local governments. TOP received over 700 applications for funds in FY 2002, and grants totaling more than $12 million were awarded to twenty-five recipients. The grants were matched by private sector, and state and local organization contributions. The program highlights the uses of information technology to address areas of public concern including housing, safety, economic development and electronic government capabilities. Average grant sizes exceeded original target expectations.

Targets and Performance Summary

See individual Performance Goal section for further description of each measure.

Performance Goal 1: Ensure that the Allocation of Radio Spectrum Provides the Greatest Benefit to All People

Measure	FY 1999 Actual	FY 2000 Actual	FY 2001 Actual	FY 2002 Target	FY 2002 Actual	FY 2002 Met	FY 2002 Not Met
Number of new agency-requested spectrum assignment actions	80,181	90,615	113,654	91,000	104,830	X	

Performance Goal 2: Promote the Availability, and Support New Sources, of Advanced Telecommunications and Information Services

Measure	FY 1999 Actual	FY 2000 Actual	FY 2001 Actual	FY 2002 Target	FY 2002 Actual	FY 2002 Met	FY 2002 Not Met
Number of models or grants available for nonprofit or public-sector organizations	43	35	74	30	25		X

Resource Requirements Summary

(Dollars in Millions. Funding amounts reflect total obligations.)
Information Technology (IT)
Full-Time Equivalent (FTE)

Performance Goal 1: Ensure Allocation of Radio Spectrum Provides the Greatest benefit to all people				
	FY 1999 Actual	FY 2000 Actual	FY 2001 Actual	FY 2002 Actual
Salaries and Expenses	$18.1	$19.8	$21.5	$27.6
Domestic and International Policies	1.0	0.9	1.0	4.3
Spectrum Management	16.2	17.8	19.3	23.4
Telecommunication Sciences Research	1.8	2.0	2.1	4.3
Total Funding	18.1	19.8	21.5	27.6
IT Funding[1]	0.0	2.4	3.2	5.0
FTE	138	135	133	168

Performance Goal 2: Promote the Availability, and Support New Sources, of Advanced Telecommunications and Information Services				
	FY 1999 Actual	FY 2000 Actual	FY 2001 Actual	FY 2002 Actual
Salaries and Expenses	$6.9	$5.4	$5.6	$5.6
Telecommunication Sciences Research	0.0	0.0	0.0	5.6
Public Telecommunications Facilities Planning and Construction	23.6	27.5	44.2	47.6
Grants	21.7	25.8	42.0	45.4
Program Management	1.9	1.7	2.2	2.2
Information Infrastructure Grants	21.4	17.7	46.3	15.5
Grants	17.6	13.9	42.9	12.4
Program Management	3.8	3.8	3.3	3.1
Total Funding	51.9	50.6	96.0	68.6
IT Funding[1]	0.0	0.6	0.7	0.7
FTE	87	85	86	76

Grand Total	FY 1999 Actual	FY 2000 Actual	FY 2001 Actual	FY 2002 Actual
Salaries and Expenses	$29.0	$28.8	$30.7	$33.2
Public Telecommunications Facilities Planning and Construction	23.6	27.5	44.2	47.6
Information Infrastructure Grants	21.4	17.7	46.2	15.5
Total Funding	74.0	74.0	121.1	96.3
Direct	56.5	56.2	101.8	77.1
Reimbursable[2]	17.5	17.8	19.4	19.1
IT Funding[1]	0.0	4.5	5.4	5.7
FTE	256	246	244	244

[1] *IT funding included in total funding.*

[2] *Reimbursable funding included in total funding.*

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.

FY 2002 Performance Goals

Performance Goal 1: Ensure allocation of radio spectrum – a scarce resource essential to all communications – provides the greatest benefit to all people

Corresponding Strategic Goal

Strategic Goal 1: Provide the information and the framework to enable the economy to operate efficiently and equitably.

Rationale for Performance Goal

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 intertwined with its policy activities because 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 the private sectors; (2) providing the fifty-six 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 U.S.'s 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; and (5) improving through telecommunications research and engineering the understanding of radio-wave transmission, thereby improving spectrum utilization and the performance of radio-communications systems.

FY 2002 Performance

In April, NTIA hosted a two-day Spectrum Management Summit with joint participation by the FCC. The objective was to hear from the experts about the successes and failures of current spectrum management policies, as well as how to further improve the process. From the summit, several basic spectrum management goals emerged that have guided NTIA's work in FY 2002 and will continue in FY 2003. First, the U.S. government agencies involved in spectrum management — NTIA, FCC and the State Department — must work collaboratively as "one spectrum team" to serve the nation's collective interest. Second, policies that encourage spectrum efficiency must be further developed. NTIA has long advocated and required the use of spectrum efficient technologies by federal agencies. For example, NTIA has developed, and the federal agencies are now implementing, a transition to narrowband technology to relieve the congestion in the land mobile radio bands used by the federal government. NTIA and the federal public safety agencies have adopted technical standards for receivers to minimize interference and increase overall spectrum efficiency. NTIA is also exploring innovative new technologies, including those that will permit radios to select their operating frequencies, decrease power, and adjust coverage, based on sensing the operating environment and dynamically selecting unused channels. Third, forward-looking policies must be established that enable technological advances and eliminate legacy regulations that stand in the way of innovation. One such promising reform

in this area is the FCC's proceeding on creating secondary markets that would permit parties to "lease" their spectrum to others to put otherwise unused spectrum to its most efficient use. Another is the accommodation of frequency flexible wireless systems, such as those under the 802.11 standard, on an unlicensed basis. Fourth, policies must assure the deployment of robust wireless networks that are prepared for the worst of crises and able to deliver the very best of services to the American people. The events of September 11, 2001 demonstrated how critically important communications capabilities are for the nation's first-responders. Interoperability among these agencies is essential to their ultimate success. NTIA is attempting to assist in achieving this goal through research at its Boulder, Colorado laboratory, and through education and outreach. NTIA and the Public Safety Wireless Network Program co-hosted a summit in Washington, D.C. to focus on current and emerging solutions for achieving interoperability.

In FY 2002, NTIA, in coordination with the FCC, the Department of Defense, and other federal agencies, announced a plan to make 90 MHz of radio spectrum available in the future to meet the needs for advanced, 3G wireless telecommunications services. After extensive public outreach and work with industry and affected agencies on technical analyses of the various band options, NTIA and the federal agencies identified 45 MHz from the 1710-1755 MHz band, while the FCC identified 45 MHz from the 2110-2170 MHz band. The cooperative efforts of all the interested stakeholders resulted in a plan known as the "3G Viability Assessment" that will accommodate critically-important spectrum requirements for national security at the same time it frees up valuable spectrum needed to bring innovative new services to U.S. consumers. NTIA will be working with the FCC in FY 2003 as it moves forward on the recommendations in the viability assessment. In related activity, NTIA helped with the process of relocating federal spectrum users by developing the rules for reimbursement of displaced users, as required by the Balanced Budget Act of 1997. NTIA continues to work on proposed legislation to further refine the process by creating a "special fund" from the proceeds of auctions conducted for that spectrum to reimburse federal users. A process involving a special fund should provide more information to bidders and less friction in the reimbursement and relocation process.

In May 2000, the FCC issued a notice of proposed rulemaking to amend its rules to accommodate UWB devices in the radio spectrum without causing harmful interference to governmental operations, including critical air traffic control, weather warning systems, and national defense systems; or commercial communications systems, including TV and radio broadcasting, domestic and international commercial satellites, and cellular telephones. NTIA conducted extensive measurements and analyses, including tests and analyses of UWB effects on a number of governmental systems and the satellite-based global positioning system (GPS). NTIA worked closely with the affected Federal agencies, including DOD and the FCC, to ensure that the FCC's rules will protect critical government uses of the spectrum. The rulemaking process concluded in FY 2002, and the FCC and NTIA were able to develop a technically-sound set of regulations for the safe and effective authorization of UWB technology while preserving public safety and national security.

Measure 1a: Number of New Agency-requested Spectrum Assignment Actions

	FY 1999	FY 2000	FY 2001	FY 2002
Target	NEW	80,000	91,000	91,000
Actual	80,181	90,615	113,654	104,830
Met/Not Met		Met	Met	Met

Explanation of Measure

This measure was intended to cover the broad array of spectrum management activities. NTIA included, among other things, the average time required to process spectrum assignments when reporting internally on annual performance results. By FY 2003, NTIA will replace the spectrum assignment total number measure with new measures on timeliness of processing, percentage of requests accomplished entirely online, and the completeness and accuracy of agency assignment requests. NTIA will also resume reporting on its annual customer satisfaction surveys.

FY 2002 Performance

NTIA processed 78,750 new, modification, and deletion frequency assignment actions, and 26,080 corrections to Government Master File assignments for a total of 104,830 Frequency Assignment Actions. In response to the September 11th tragedy, NTIA operated 24-hours-a-day, 7-days-a-week to process frequency requests by federal agencies for law enforcement, special operations, and search and rescue operations at the World Trade Center and the Pentagon. NTIA also processed spectrum assignment requests from the Departments of Defense (DOD), Justice, Treasury, and Energy; the Federal Emergency Management Agency; the White House Communications Agency; and the American Red Cross. To meet DOD's spectrum needs alone, NTIA expedited coordination on almost 7,000 frequency assignments through the use of a unique computer automation process.

Program Evaluation

NTIA management reviewed and assessed policy and program priorities in the development of FY 2003 and 2004 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. The 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.

Performance Goal 2: Promote the Availability, and Support New Sources, of Advanced Telecommunications and Information Services

Corresponding Strategic Goal

Strategic Goal 2: Provide infrastructure for innovation to enhance American competitiveness

Rationale for Performance Goal

In addition to its policy-related activities, the National Telecommunications and Information Administration (NTIA) supports innovative telecommunications and information technologies through a grant program and through basic research performed at its laboratory, the Institute for Telecommunication Sciences (ITS). NTIA's Public Telecommunications Facilities Program (PTFP) provides grants to public television and radio stations as well as distance-learning projects. A growing proportion of the public television grants support conversion to digital broadcasting, which has implications for the digital conversion of all television broadcasting and the potential availability of analog broadcasting spectrum for new telecommunications and information services. 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.

FY 2002 Performance

NTIA awarded $36 million in Public Telecommunications Facilities Program (PTFP) grants to assist 97 public broadcasting stations across the country complete federally mandated conversions to digital technology. An additional $6 million in PTFP grants were awarded for public radio, distance learning, and replacement of television equipment. The federal grants, which total $42 million, will be matched by more than $74 million in funds raised by the recipients. Of the 116 PTFP grants awarded, most of the funds, in 52 awards totaling over $36 million, will be used to assist 97 public television stations in their conversion efforts, while seven of the television awards will help stations replace basic equipment.

NTIA awarded 59 grants totaling $37.4 million to public television stations; 52 grants totaling $3.1 million to public radio stations; four distance learning grants totaling $1 million; and one grant to the University of Hawaii for $475,000 for the PEACESAT project (Pan-Pacific Educational and Cultural Experiments by Satellite). In addition to these projects, NTIA awarded three grants from a special supplemental appropriation earlier in the year to three stations in New York City—WNET-TV, WNYC-FM, and WKCR-FM. The grants are helping to re-establish the stations' transmission facilities that were destroyed by the September 11, 2001 terrorist attack on the World Trade Center.

Measure 2a: Number of Models or Grants Available for Non Profit or Public Sector Organizations				
	FY 1999	FY 2000	FY 2001	FY 2002
Target	43	50	80	30
Actual	43	35	74	25
Met/Not Met	Met	Not Met	Not Met	Not Met

Explanation of Measure

This measure reflected the number of grants by NTIA's Technology Opportunities Program (TOP). The FY 2002 target has been decreased to reflect a lower funding level. There is no target for FY 2003. NTIA staff will continue to monitor existing grantees for compliance with grant terms through required reporting and closeout procedures. The Inspector General may also conduct audits of grantees.

FY 2002 Performance

NTIA awarded $12.4 million in TOP grants to 25 non-profit organizations, including state and local governments, in 19 states and the District of Columbia. TOP received 741 applications for FY2002 funds. TOP grants, matched by $13.6 million in contributions from the private sector and state and local organizations, demonstrate how information technology can be used to address public concerns over areas such as housing, safety, economic development, and e-government. The average size of the actual grants was larger than first expected when the target was developed.

Program Evaluation

NTIA management reviewed and assessed policy and program priorities in the development of FY 2003 and 2004 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.)

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 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. The NTIA Data Validation and Verification table can be found on the following page.

NTIA Data Validation and Verification

Performance Measure	Data Source	Frequency	Data Storage	Verification	Data Limitations	Actions to be Taken
Measure 1: Number of new agency-requested spectrum assignment actions	Government Master File (GMF) of frequency assignments.	Monthly updates	GMF is stored on a mission critical system and is issued monthly to federal agencies on compact disk.	GMF has built in checks and receives extensive program staff review.	None	Measure spectrum assignment actions.
Measure 2: Number of models or grants available for nonprofit or public-sector organizations	NTIA's grant awards are made annually, and information on all applicants and recipients is posted on the NTIA Web site at http://www.ntia.doc.gov.	Annual	Data is stored on servers located at NTIA headquarters in the Herbert C. Hoover Building in Washington, D.C.	Data on grants awarded can be verified by the Department of Commerce's Office of Financial Management.	None	Survey of grants.