



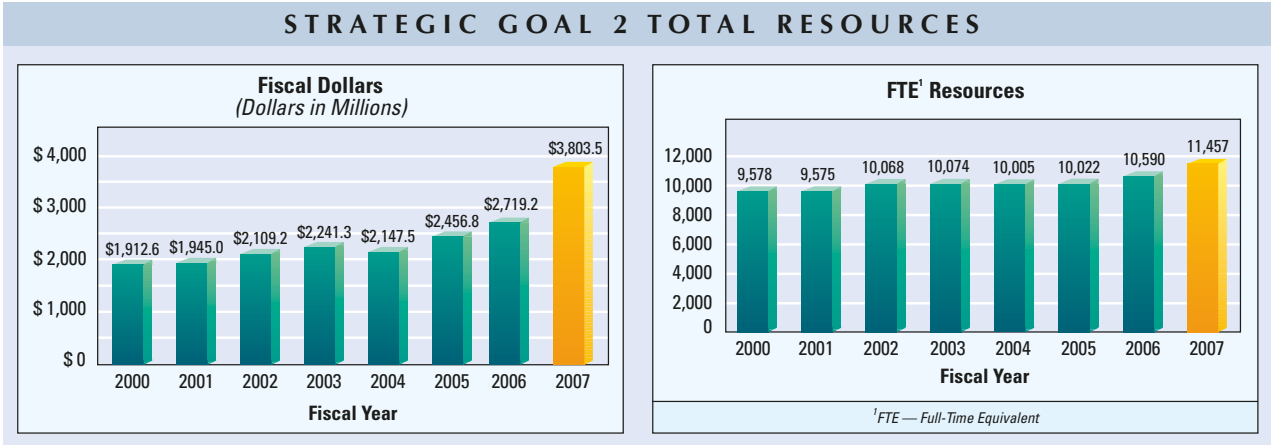
STRATEGIC GOAL 2

PERFORMANCE OUTCOME	TARGETS MET OR EXCEEDED
Promote innovation, facilitate trade, and ensure public safety and security by strengthening the Nation's measurements and standards infrastructure (NIST)	6 of 6
Accelerate private investment in and development of high-risk, broad-impact technologies (NIST)	2 of 3
Raise the productivity and competitiveness of small manufacturers (NIST)	4 of 4
Enhance public access to worldwide scientific and technical information through improved acquisition and dissemination activities (NTIS)	3 of 3
Optimize patent quality and timeliness (USPTO)	6 of 7
Optimize trademark quality and timeliness (USPTO)	8 of 8
Improve intellectual property protection and enforcement domestically and abroad (USPTO)	3 of 3
Ensure that the allocation of radio spectrum provides the greatest benefit to all people (NTIA)	5 of 5
Promote the availability, and support new sources, of advanced telecommunications and information services (NTIA)	2 of 2



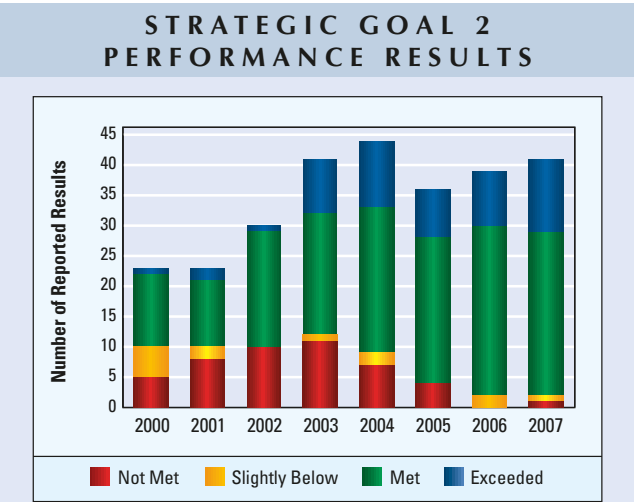
STRATEGIC GOAL 2

Foster science and technological leadership by protecting intellectual property (IP), enhancing technical standards, and advancing measurement science



Working with U.S. industry to develop and apply technology, measurements, and standards, the Department is focused on providing the infrastructure necessary to develop innovative breakthroughs and new technologies vital to the Nation's long-term economic growth.

The Department's laboratories provide the measurement science and standards capabilities needed by industry to continually develop new and improved products and services and enhance quality of life. Over 400 National Institute of Standards and Technology (NIST) staff members participate in more than 105 standards development organizations each year, and NIST sells more than 30,000 Standard Reference Materials (SRM) and 5,000 Standard Reference Databases annually. The Department's measurement and standards work



See Appendix A: Performance and Resource Tables for individual reported results.

addresses a significant portion of the Nation's modern technology-based economy, from the automotive to the biotechnology sector, from basic materials and manufacturing to information technology (IT), and from companies with a handful of employees to the largest firms along with universities and other government agencies.

Intellectual property (IP) is a potent force in, and a fundamental component of, the global economy. The Department strives to preserve the Nation's competitive edge by protecting IP and encouraging technological innovation. In market-driven economic systems, innovation provides a catalyst for economic prosperity through the accumulation of scientific knowledge; introduction of new products and services; and improvements in the productivity levels of land, labor, and capital resources.

Some of the FY 2007 accomplishments include:

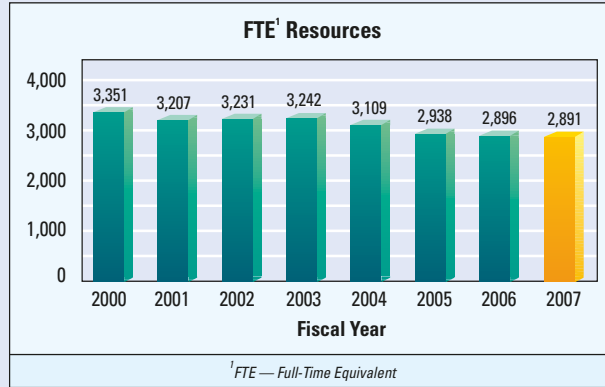
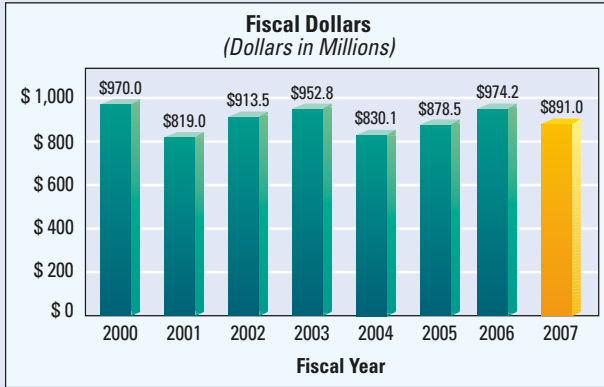
- ◆ **Radiation monitoring.** NIST established a new voluntary accreditation program for the laboratories that test radiation detection equipment used by first responders. The new program will help ensure that laboratories testing a wide variety of new radiation detection instruments produce comparable results, allowing homeland security personnel to better assess the best products for each application. From personal radiation detectors the size of pagers to units large enough to scan trucks and trains, emergency responders can choose from a wide variety of radiation detection equipment for homeland security applications. To make informed decisions when buying equipment, they must have confidence that instrument test results from different laboratories are comparable. The new NIST program, developed with support from the Department of Homeland Security (DHS), offers laboratories the opportunity to be accredited for their ability to test radiation detection equipment in conformance with recognized industry standards. The new service is part of NIST's National Voluntary Laboratory Accreditation Program (NVLAP).
- ◆ **Supporting innovation in industry.** The NIST Advanced Technology Program (ATP) was created to encourage industry investment in longer-term, high-risk research with broad economic and social payoffs for the Nation. Through cost-sharing awards, ATP accelerates the development of early-stage, innovative technologies, helping industry raise its competitive potential while providing Americans with a higher standard of living. Under the FY 2007 Continuing Appropriations Resolution, Congress provided ATP with \$79 million to fund a competition for new research and development (R&D) projects. ATP announced the competition on April 4, 2007, and made 56 awards in FY 2007.
- ◆ **Secure communication.** NIST researchers have built a prototype high-speed quantum key distribution (QKD) system, based on a new detector system that achieves dramatically lower noise levels than similar systems. The new system, they say, can perform a theoretically unbreakable "one-time pad" encryption, transmission, and decryption of a video signal in real-time over a distance of at least 10 kilometers. Key distribution—the problem of ensuring that both the sender and receiver of an encrypted message (and no one else) share the same long string of random digits (the so-called "key") used to encode and decode the message—has always been one of the most important challenges in cryptography. Since the 1980's it's been recognized that the unique properties of quantum mechanics—the fact that certain measurements cannot be made without altering the thing measured—offered the possibility of a system that could transmit as long a key as desired between two parties with no chance that it could be copied undetectably by a third party. The NIST QKD system won an R&D 100 award from Research and Development Magazine.

The Department has demonstrated successful progress under this strategic goal. Bureaus with programs supporting this strategic goal include NIST, the National Technical Information Service (NTIS); the U.S. Patent and Trademark Office (USPTO); and the National Telecommunications and Information Administration (NTIA).

STRATEGIC OBJECTIVE 2.1

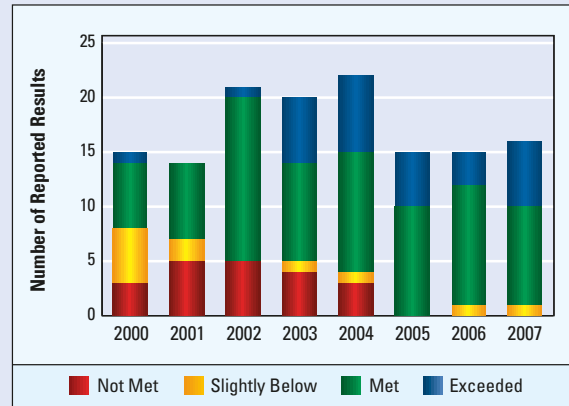
Develop tools and capabilities that improve the productivity, quality, dissemination, and efficiency of research

STRATEGIC OBJECTIVE 2.1 TOTAL RESOURCES



Through NIST, the Department works with U.S. industry and other stakeholders to promote U.S. innovation and industrial competitiveness by advancing measurement science, standards, and technology in ways that enhance economic security and improve quality of life. NIST fulfills its broad responsibilities and works to foster science and technological leadership by helping the United States to drive and take advantage of the increased pace of technological change, fostering more efficient transactions in the domestic and global marketplace, and addressing other critical national needs assigned to NIST by the Administration and Congress.

STRATEGIC OBJECTIVE 2.1 PERFORMANCE RESULTS

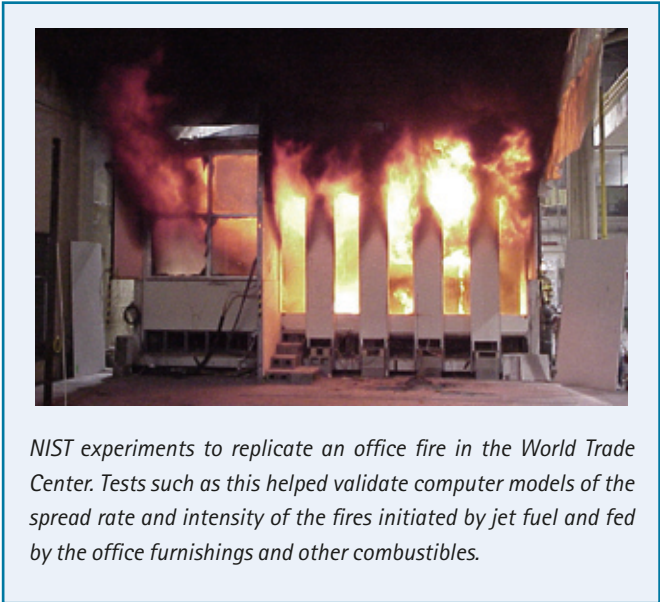


See Appendix A: Performance and Resource Tables for individual reported results.

PERFORMANCE OUTCOME	TARGETS MET OR EXCEEDED
Promote innovation, facilitate trade, and ensure public safety and security by strengthening the Nation's measurements and standards infrastructure (NIST)	6 of 6
Accelerate private investment in and development of high-risk, broad-impact technologies (NIST)	2 of 3
Raise the productivity and competitiveness of small manufacturers (NIST)	4 of 4
Enhance public access to worldwide scientific and technical information through improved acquisition and dissemination activities (NTIS)	3 of 3

Among its FY 2007 activities, NIST accomplished the following:

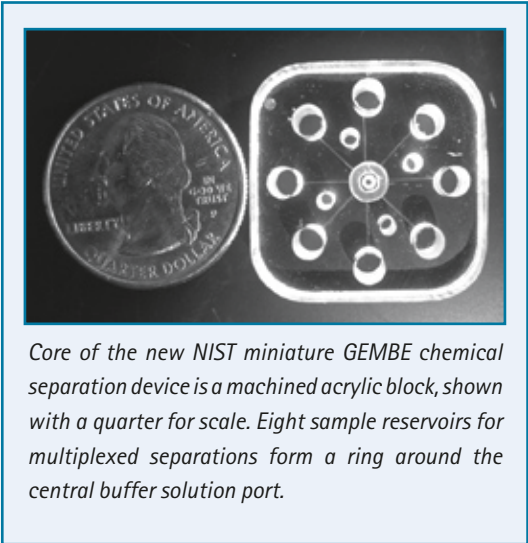
- ◆ Nanotechnology and nanoscale manufacturing are key components of the American Competitiveness Initiative. In March 2006, Commerce Secretary Gutierrez announced that NIST would create a new Center for Nanoscale Science and Technology (CNST) that would offer researchers from universities, industry, and other government agencies access to state-of-the-art facilities to study a wide range of nanotechnology topics. In May 2007, NIST announced that CNST is now accepting proposals for work in nanotechnology research. CNST focuses on overcoming major technical obstacles to cost-effective manufacturing of products made with components the size of atoms and molecules by developing measurement methods, standards, and technology that help emerging nanotechnologies move from the laboratory to production. CNST is located within NIST's Advanced Measurement Laboratory (AML), one of the most advanced research facilities of its kind in the world.



NIST experiments to replicate an office fire in the World Trade Center. Tests such as this helped validate computer models of the spread rate and intensity of the fires initiated by jet fuel and fed by the office furnishings and other combustibles.

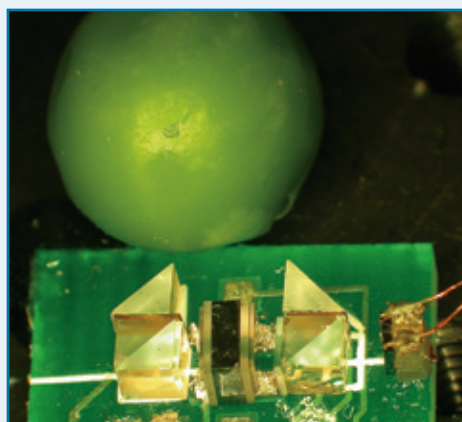
- ◆ Recommendations stemming from NIST's three-year investigation of the World Trade Center disaster have stimulated fundamental and substantial changes in U.S. building codes and standards that represent a significant improvement in public safety over current practice. The International Code Council approved a comprehensive set of building code changes that were incorporated into the organization's International Building Code, a model code used as the basis for building regulations promulgated and enforced by U.S. state and local jurisdictions. The code changes address such areas as the fire resistance of structural components, the use of sprayed fire-resistive materials (commonly known as fire-proofing), elevators for use by first responders, the number of stairwells, and exit path markings.

- ◆ NIST researchers have developed an elegantly simple, miniaturized technique—gradient elution moving boundary electrophoresis (GEMBE)—for rapidly separating minute samples of proteins, amino acids, and other chemical mixtures. The device is easy to build with simple machining or molding techniques and low-cost polymers, enabling inexpensive mass production, and can run up to eight chemical separations simultaneously in a space about the size of a quarter, highlighting the technique's potential for use in microfluidic "lab-on-a-chip" systems. NIST has used the device in trial separations for everything from small dye molecules and amino acids to large biomolecules, such as DNA. A prototype eight-channel GEMBE device built at NIST can produce a complete immunoassay calibration curve for insulin in a single run.



Core of the new NIST miniature GEMBE chemical separation device is a machined acrylic block, shown with a quarter for scale. Eight sample reservoirs for multiplexed separations form a ring around the central buffer solution port.

- ◆ NIST researchers have created the latest in a series of miniaturized optical instruments, which includes an atomic clock that fits on a computer chip. The newest chip-scale device—roughly the size of a pea—is a spectrometer that can be used for calibrating or stabilizing precision lasers. It could replace table-top-sized instruments used for laser calibration in atomic physics research, could better stabilize optical telecommunications channels, and perhaps could replace and improve on the precision of instrumentation used to measure chemicals or atmospheric gases. The spectrometer includes miniature optics, a microfabricated container for atoms in a gas, heaters, and a photodetector, all within a cube about 10 millimeters on a side. In telecommunications, the mini-spectrometer would offer greater precision than the physical references now used to separate fiber-optic channels, with the advantage that more channels might be packed into the same spectrum, dramatically increasing data capacity.



The newest chip-scale device—roughly the size of a pea—is a spectrometer that can be used for calibrating or stabilizing precision lasers.

- ◆ In February 2007, NIST published a comprehensive report on measurement barriers to innovation, the Agency's first ever assessment of the capacity of the Nation's measurement infrastructure—*An Assessment of the United States Measurement System: Addressing Measurement Barriers to Accelerate Innovation*. In all, more than 1,000 people from industry, academia, and government contributed to the wide-ranging NIST assessment of the state of the Nation's measurement system and its impact on innovation. The result is a snapshot appraisal that was formed by surveying measurement needs across 11 industrial sectors and technology areas. These ranged from materials to software and from building and construction to nanotechnology. Altogether, more than 700 measurement-related barriers to innovation were identified and evaluated. NIST will use this assessment to focus its own work in support of U.S. innovation and competitiveness. The report's results and findings, along with input gathered in follow-up activities, will inform NIST's strategic planning decisions. NIST also plans to work with other organizations in both the private and public sectors to raise awareness of the important role that advances in measurement science and technology (S&T) play in boosting innovation. A new U.S. Measurement System (USMS) office has been established at NIST to coordinate these activities.

- ◆ Members of a NIST research team watched flames erupt from an abandoned Chicago apartment building during a November 10, 2006 test of positive pressure ventilation (PPV) in high-rise fires. The controlled fires in the Windy City high-rise were part of a real-world laboratory experiment to study the effectiveness in multistory buildings of PPV, the use of powerful fans during fires to force smoke and heat from corridors and stairwells so that they stay passable and safe for both escaping occupants and entering emergency responders. In past events—such as the October 2003 blaze in a government building in Chicago where six people died—fire flow into corridors and stairwells has resulted in tragedy.



Members of a NIST research team watch flames erupt from an abandoned Chicago apartment building during a November 10, 2006 test of PPV in high-rise fires.

- ◆ The 2007 Baldrige Criteria for Performance Excellence incorporates some of the most significant changes in the recent history of the criteria's evolution. The 2007 criteria address four areas of growing importance to strengthening U.S. competitiveness: (1) strategic advantages and core competencies, (2) innovation, (3) work systems, and (4) workforce engagement. In addition, several innovations tested during last year's non-profit pilot have been incorporated in the 2007 process to identify recipients of the Malcolm Baldrige National Quality Award (MBNQA). The innovations include using a Web-based solution to conduct a "virtual consensus" discussion in order to provide all applicants with feedback reports while providing more time flexibility to the 600 volunteer examiners.

- ◆ NIST engineers have been assisting DHS in organizing a series of Response Robot Evaluation Exercises for urban search and rescue (US&R) robots. Various types of sensor-laden robots, including small survey devices that can be thrown into a disaster site; unmanned systems that can cover rugged, uneven terrain; and small, rotary-winged aerial reconnaissance drones were designed to detect injured people and trace elements of radiation in simulated natural disaster or terrorist attacks. The latest rescue robot exercise was held in June 2007, at Texas A&M's "Disaster City" training facility in College Station, TX.



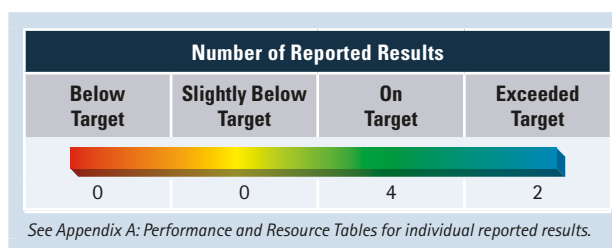
NIST engineers have been assisting the Department of Homeland Security in organizing a series of Response Robot Evaluation Exercises for US&R robots.

- ◆ NIST chemists have created a standardized form of common house dust to support environmental scientists studying everyday exposure to a catalog of potentially hazardous chemicals. A "standard house dust" may sound funny, but environmental scientists are quite serious about the potential for household grime to harbor harmful chemicals. For example, a 2004 study by NIST and the Environmental Protection Agency (EPA), found high concentrations of polybrominated diphenyl ethers (PBDE) in household dust. PBDEs were widely used as flame retardants in consumer products but have been phased out due to concerns over their toxicity. Once commonly used in electrical equipment as an insulator, PBDEs have not been produced since 1977 because of their toxicity, but still are found in the environment. Accurate assessment of everyday exposure to many potentially harmful contaminants is difficult because of both the complexity of the analysis and the small quantities involved. Polychlorinated biphenyls (PCB), for example, include dozens of chemically similar compounds that may be found in hundreds of combinations of only a few micrograms each in a kilogram of dust. To provide environmental scientists with an accurate baseline for calibrating their tests, NIST prepared a reference sample of typical house dust that has been certified for the concentrations of over 80 potentially hazardous chemicals.

Performance Outcome: Promote innovation, facilitate trade, and ensure public safety and security by strengthening the Nation's measurements and standards infrastructure (NIST)

The Nation's ability to innovate and compete in a global economy depends on a robust scientific and technical infrastructure, including research, measurement tools, standards, data, and models. The NIST Laboratories develop and disseminate measurement techniques, reference data, test methods, standards, and other technologies and services required by U.S. industry to compete in the 21st century.

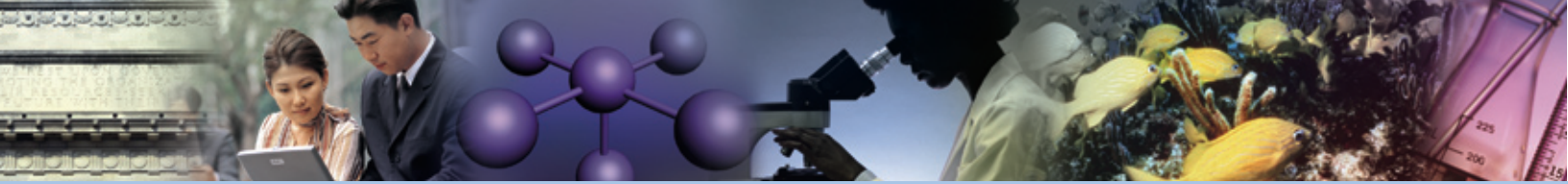
NIST evaluates progress on this outcome using an appropriate mix of specific output tracking and peer review. Together, these evaluation tools, combined with continual feedback from customers provide a comprehensive picture of performance toward this long-term goal. Additional information on these evaluation methods is available at <http://www.nist.gov/director/planning/strategicplanning.htm>.



Specific achievements of this performance outcome are described below:

- ◆ NIST measurement services, including calibration services, are critical for ensuring product performance and quality, improving production processes, making marketplace transactions fair and efficient, and leveling the playing field for international trade. NIST calibration services provide the customer with direct traceability to national and international primary standards. NIST offers more than 500 different types of physical calibrations in areas as diverse as radiance temperature, surface finish characterization, and electrical impedance. Beginning in FY 2007, this measure was revised to reflect the number of calibration tests performed versus the number of items calibrated. It is estimated that NIST performs 12,000 calibration tests annually.
- ◆ SRMs are the definitive source of measurement traceability in the United States; all measurements using SRMs can be traced to a common and recognized set of basic standards that provides the basis for compatibility of measurements among different laboratories. SRMs certified by the NIST Laboratories are used by customers to achieve measurement quality and conformance to process requirements that address both national and international needs for commerce, trade, public safety, and health. NIST sells more than 30,000 SRMs annually.
- ◆ Technical publications represent one of the major mechanisms NIST uses to transfer the results of its research to support the Nation's technical infrastructure and provide measurements and standards—vital components of leading-edge research and innovation—to those in industry, academia, and other government agencies. Each year NIST's technical staff produces a total of 2,000 to 2,200 publications with approximately 50 to 60 percent appearing in prestigious scientific peer-reviewed journals. NIST staff authors more than 1,100 publications in peer-reviewed journals each year.
- ◆ Online data represent another method NIST uses to deliver measurement and standards tools, data, and information. NIST provides online access to more than 80 scientific and technical databases covering a broad range of substances and properties from a variety of scientific disciplines. These technical databases are heavily used by industry, academia, other government agencies, and the general public, with more than 130 million estimated downloads in FY 2007.

Accomplishments and applicable quantitative data used to evaluate progress on this long-term performance outcome are reviewed quarterly. Quantitative data are collected and reported by NIST Technology Services.



PERFORMANCE SECTION * STRATEGIC GOAL 2

External and independent evaluation of the research and measurement standards work of the NIST Laboratory Programs is conducted regularly. This type of peer review, combined with quantitative evaluation metrics focused on dissemination of NIST's measurements and standards work, demonstrate the laboratories' contribution to the Nation's measurement and standards infrastructure.

In FY 2007, the National Research Council (NRC) Board on Assessment (BOA) began a process where half of the NIST Laboratories will be reviewed each year. The NRC assessments focus on the following areas:

- ◆ The technical merit of the laboratory programs relative to the current state-of-the-art worldwide.
- ◆ The degree to which the laboratory programs address national and agency priorities.
- ◆ The adequacy of the laboratories' facilities, equipment, and human resources as they affect the quality of the technical programs.

The following quotes from NRC's FY 2007 assessment report attest to the quality, technical merit, and relevance of NIST programs:

- ◆ *Center for Neutron Research (NCNR)*: "There is a substantial and well-satisfied external user community. The in-house science and technology is robust."
- ◆ *Chemical Science and Technology Laboratory (CSTL)*: "These measurement capabilities are foundational to U.S. competitiveness, especially in new and emerging technologies. The large number of publications, committee leaderships, and visiting U.S. and foreign scientists and postdoctoral fellows testifies to [CSTL's] technical reputation and leadership position in measurement science."
- ◆ *Electronics and Electrical Engineering Laboratory (EEEL)*: "This combination of innovation and technical achievement promises to serve well the emerging technologies of the future."
- ◆ *Information Technology Laboratory (ITL)*: "The work at ITL generally ranks at or near the top of the work being done by peer institutions."

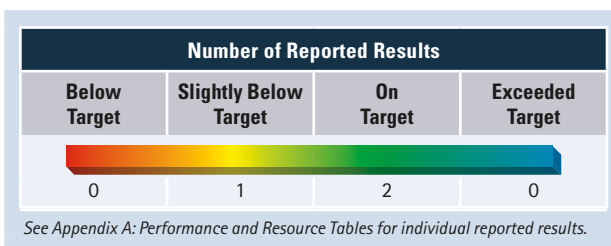
These reports are available at <http://www.nist.gov/director/nrc>.

In addition to peer reviews, the programmatic goals and strategic direction of NIST as a whole are reviewed regularly by the Visiting Committee on Advanced Technology (VCAT). The VCAT is a legislatively mandated panel of external advisors that meets quarterly to review NIST's general policy, organization, budget, and programs. In its most recent annual report, the VCAT recognized the world renowned professional accomplishments contributing to NIST's ability to attract world class researchers, a NIST competitive advantage. See <http://www.nist.gov/director/vcat/index.htm> for additional information on the VCAT, including its most recent annual report.

Performance Outcome: Accelerate private investment in and development of high-risk, broad-impact technologies (NIST)

ATP provides cost-shared funding to businesses to develop high-risk, innovative new technologies for commercial use. ATP held a single competition for funding during FY 2007.

Key indicators of the generation and diffusion of new commercially relevant technical knowledge include patents and technical publications generated by ATP-funded projects and ATP-funded projects with technologies under commercialization. The long-term nature of ATP-funded projects results in a three to five-year lag from initial project funding to the generation of measurable outputs and outcomes.



Specific achievements of this performance outcome are described below:

- ◆ Publications and patents represent major channels for the diffusion of technical knowledge that results from ATP investment in the development of new technologies. Past ATP-funded research generated more than 1,900 cumulative publications and more than 1,500 cumulative patents through FY 2006.
- ◆ The number of ATP-funded projects with technologies under commercialization is an indication of the extent to which ATP-funded research leveraged or catalyzed new products and services. Through FY 2006, over 370 ATP projects have technologies under commercialization.
- ◆ The program met its targets for commercialization and publications, though it slightly missed its target for patents (1,507-actual, 1,510-target).

Evaluation is a central part of ATP's operation. ATP uses a variety of methods, including internal assessments, external program reviews, and economic impact studies to assess and evaluate the program. Additional information on ATP's evaluation methods is available at http://www.atp.nist.gov/eao/eao_main.htm.

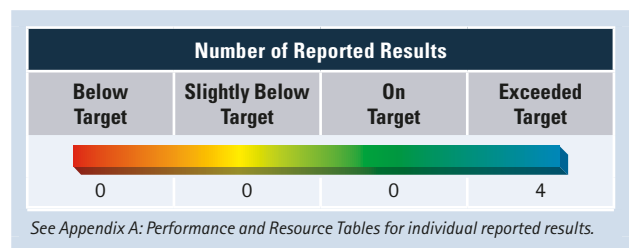
The measures above, along with other programmatic accomplishments, are used to evaluate ATP's progress towards its long-term goal of increasing investment in and development of new technologies. Data are gathered from the portfolio of ATP project participants through ATP's Business Reporting System (BRS). BRS reports are reviewed by ATP's Economic Assessment Office and the individual project managers overseeing the ATP project.

The programmatic objectives and management of ATP are reviewed by the ATP Advisory Committee. Additional information on the ATP Advisory Committee, including recent annual reports, is available at http://www.atp.nist.gov/adv_com/ac_menu.htm. ATP was abolished by the America COMPETES Act (Public Law 110-69) which was signed by the President on August 9, 2007. However, this statute allows for continued support for previously awarded ATP projects and the 56 new FY 2007 awards.

Performance Outcome: Raise the productivity and competitiveness of small manufacturers(NIST)

The most significant challenge facing U.S. manufacturers continues to be coping with accelerating technological change and global competition. The firms that succeed will be those best able to manage the complexity and rapid change affecting all aspects of the manufacturing enterprise. Through the Hollings Manufacturing Extension Partnership (MEP) program’s nationwide network of manufacturing centers, which are linked to state, university, community college, and private sources of technology and expertise, NIST helps smaller firms adopt new and advanced manufacturing and management technologies and innovative business practices to position them to compete in the global economy.

The Nation’s approximately 350,000 small manufacturers employ over 11 million people providing intermediate parts and equipment that contribute more than half of the value of U.S. manufacturing production. Their role in manufacturing supply chains is crucial; and the Nation’s future manufacturing productivity and competitiveness rests largely on the ability of these establishments to raise their efficiency, lower their costs, and implement a culture of innovation into their business operations. Hollings MEP helps companies transform themselves into high performance enterprises—productive, innovative, customer-driven, and competitive—by efficiently providing high value technical and advisory services, including access to industry best practices.



MEP clients receive technical, business, and innovation services through interactions ranging from informational seminars and training to in-depth technical assistance in areas such as new product development and implementation, quality improvement practices, human resources and organizational development, and industrial marketing.

Specific achievements of this performance outcome are described below:

- ◆ MEP’s network of manufacturing assistance centers works at the grassroots level with each center providing their local manufacturers with expertise and services tailored to their most critical needs. In FY 2006, MEP centers provided services to over 16,000 clients in industries such as fabricated metal products, computer and electronic products, and transportation equipment.
- ◆ Through an annual survey of clients, the program obtains quantifiable impacts of MEP services on its clients’ bottom line. MEP demonstrates the impact of its services on three key quantitative business indicators that, as a set, suggest the presence of business changes that are positively associated with productivity, revenue growth, and improved competitiveness. The measures include: (1) increased sales attributed to MEP assistance, (2) increased capital investment attributed to MEP assistance, and (3) cost savings attributed to MEP assistance.

The performance measures, along with other programmatic accomplishments, are used to evaluate progress on this long-term performance goal. MEP’s Client Impact Survey is administered by a private firm. Each quarter, the data is reviewed by NIST MEP staff and center staff. Based on defined criteria, impacts are selected by NIST MEP for confirmation and verification by center staff.

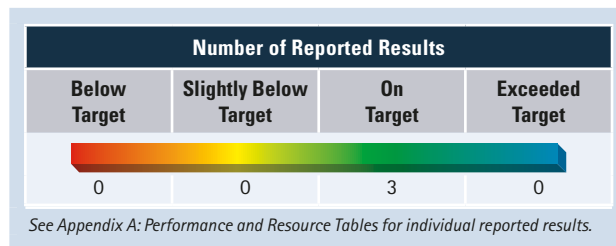


As with other NIST programs, the programmatic objectives and management of MEP are reviewed by the VCAT and MEP's National Advisory Board (NAB), which was established by the Secretary of Commerce in October 1996. Recently, the charter for the MEP NAB was amended to add flexibility and respond to the program's shift in emphasis to enhancing firms' innovation capabilities. NIST is now in the process of selecting additional board members. The first meeting of the reconstituted board was held in March 2007.

Performance Outcome: Enhance public access to worldwide scientific and technical information through improved acquisition and dissemination activities (NTIS)

Bringing scientific and technical information to U.S. business and industry.

NTIS seeks to promote innovation and economic growth for U.S. business by (1) collecting, classifying, coordinating, integrating, recording, and cataloging scientific and technical information from a variety of sources, foreign and domestic; (2) disseminating this information to the public; and (3) providing information management services to other federal agencies that help them interact with and better serve the information needs of their own constituents, and to accomplish this without appropriated funds.



In FY 2007, NTIS partnered with the Government Printing Office (GPO) in an effort to provide the Federal Depository Libraries with access to many of its electronically-stored documents. NTIS and GPO began conducting a beta test pilot project with 29 Federal Depository Libraries using a new interface NTIS developed to support the program implementation. The project included access to approximately 240,000 full text publications dating from 1964 to 2000 that were available for downloading, at no charge. The results of the beta test were very positive and program participation is now offered to all 1,262 Depository Libraries. There are currently over 340 Depository Libraries participating in the program, and that number is expected to continue to grow making invaluable research results more readily available to the U.S. public.

NTIS has successfully contributed to the White House initiative prompting improved early childhood development programs for the Nation's children, through the storage and distribution of the materials developed by the Departments of Health and Human Services (HHS), Education, and Agriculture (USDA). The program is called the "Healthy Start, Grow Smart" program and provides easily understood information booklets to parents and caregivers about best practices in early childhood development. The information is published in English, Spanish, Vietnamese, and Chinese providing valuable age-appropriate information about health, safety, nutritional needs, and early cognitive development. NTIS manages the storage and distribution of over 10 million booklets annually, and anticipates increased dissemination in the future.

STRATEGIES AND FUTURE PLANS

NIST uses a variety of methods, including hosting conferences and workshops; participating on standards committees; and ongoing interactions with industry, professional groups, universities, and other government agencies to identify the needs of its diverse customers. In FY 2007, NIST supplemented its usual large number of conferences and workshops with a special series of private-public sessions for the USMS—all aimed at identifying priority measurement needs impeding future technological innovations. NIST led this comprehensive assessment of the USMS, and NIST scientists continued to work closely with industry on developing R&D roadmaps. Through these private-public collaborations, priority measurement needs from across industry and the economy are identified, along with potential solutions and viable solutions providers. In addition, NIST conducts retrospective and prospective economic impact studies annually to prioritize R&D funding and ensure that the Department conducts the highest priority research.

In 2006, MEP developed a Next Generation strategic plan focused on providing the innovation services that U.S. manufacturers need to grow, transform, and remain globally competitive. The plan includes a much stronger emphasis on providing technology-intensive services to U.S. small manufacturers. The Next Generation MEP will continue to leverage and expand relationships, partnering at both the federal and state level with organizations that have complementary goals focused on meeting the most pressing needs of the manufacturing community. MEP's planning process is ongoing, with input from a stakeholder list that includes small manufacturers, state representatives and economic development partners, manufacturing related associations, universities, community colleges, and MEP center staff—as well as national stakeholders in the Departments of Commerce, Labor (DOL), and Defense (DOD). This broad level of input provides a more complete picture of national manufacturing needs, the manufacturing infrastructure in which the MEP centers operate, and the priorities of the manufacturing community.

Special attention is being given to documenting the results of funded research to ensure maximum private sector use is made of this investment in the years ahead.

A new Technology Innovation Program (TIP) at NIST was authorized by the America COMPETES Act. TIP was established to support, promote, and accelerate innovation in the United States through high-risk, high-reward research in areas of critical national need. TIP is aimed at speeding the development of high-risk, transformative research targeted to address key societal challenges. Funding could be provided to industry (small and medium-sized businesses), universities, and consortia for research on potentially revolutionary technologies for meeting critical national needs that present high technical risks with commensurate high rewards if successful. The primary mechanism for this support would be cost-shared research grants, cooperative agreements, or contracts awarded on the basis of merit competitions.

NIST will continue to explore new models of public-private partnerships to encourage industry investment in R&D. The goal of these partnerships is to accelerate and promote innovation.

The Internet has provided NTIS with a great opportunity to shift from traditional information collection and dissemination activities and has expanded the end-user opportunities. As customer expectations and technology have changed, NTIS has continued to be a leader in information collection and dissemination activities, through development of highly sophisticated platforms.

In 2007, NTIS launched advanced search and navigation features for searching the NTIS Web site. This will allow users to more easily find documents from among the NTIS collection of over 2.5 million technical reports.



NTIS also assisted other federal government agencies in making information easier to find and order with the implementation of easy-to-use online ordering capabilities for USDA and the Centers for Medicare and Medicaid Services (CMS). This allows the public to more easily access nutritional and childhood development information from these agencies.

CHALLENGES FOR THE FUTURE

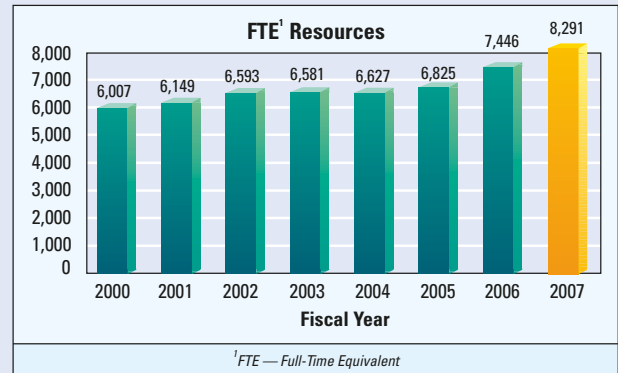
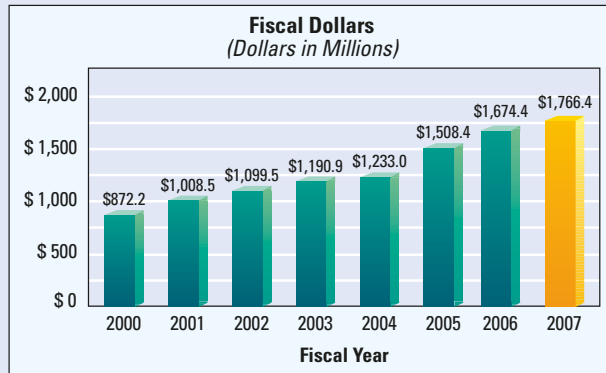
Keeping the U.S. competitive edge in the world economy depends on the Nation's ability to generate and harness the latest in scientific and technological developments—particularly in the physical sciences and engineering—and to apply these developments to real world applications. Throughout the last decade, political and technical forces have combined to open up much of the globe to commerce. Increased emphasis on the sciences has created an environment in which continuous innovation must be sustained to maintain economic success. These growth and competition trends have significant implications for U.S. technological leadership and the economic growth and jobs it generates; R&D and high-tech manufacturing strategies; competition for high-skilled workers; and the climate for attracting global investment. Technological innovation ensures continued U.S. leadership in S&T, which provides a competitive advantage that drives productivity and growth for the U.S. economy.

The Department's key role in the President's American Competitiveness Initiative, which strives to keep the United States strong and secure by ensuring that it continues to lead the world in S&T, reflects the importance of technological innovation to the Nation's economic future. The Department will continue to conduct high-priority research, identify technical measurement barriers to innovation, and transfer technical knowledge developed to the private sector as part of efforts to drive this initiative.

STRATEGIC OBJECTIVE 2.2

Protect intellectual property and improve the patent and trademark system

STRATEGIC OBJECTIVE 2.2 TOTAL RESOURCES

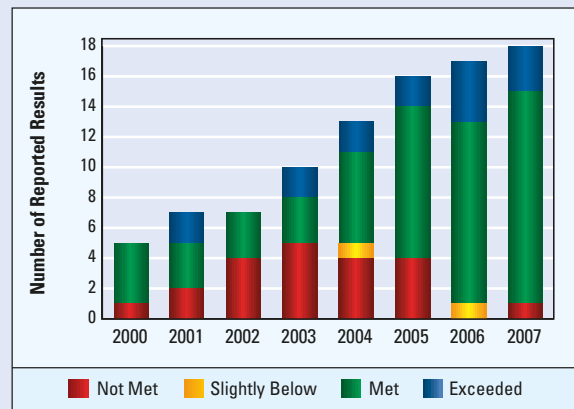


This objective focuses on ensuring that the IP system contributes to a strong global economy, encouraging investment in innovation, and fostering entrepreneurial spirit. Achievement of this objective will protect individual rights and innovation in a timely, efficient manner. A discussion of each performance outcome within this objective will further describe the impact of achieving the objective.

People worldwide benefit from innovations, both directly on a personal level, and indirectly through economic growth fueled by innovation. Continual development of a vigorous, flexible, and efficient IP system protects individual rights, encourages investment in innovation, and fosters entrepreneurial spirit.

The Department promotes the IP system through the protection of inventions or creations via patent, trademark, trade secret, and copyright laws. Under this system of protection, industry in the U.S. has flourished, creating employment opportunities for millions of Americans.

STRATEGIC OBJECTIVE 2.2 PERFORMANCE RESULTS



See Appendix A: Performance and Resource Tables for individual reported results.

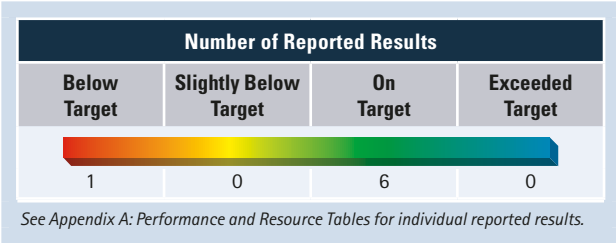
PERFORMANCE OUTCOME	TARGETS MET OR EXCEEDED
Optimize patent quality and timeliness (USPTO)	6 of 7
Optimize trademark quality and timeliness (USPTO)	8 of 8
Improve intellectual property protection enforcement domestically and abroad (USPTO)	3 of 3



The primary services the Department provides within this objective are the examination of patent and trademark applications and dissemination of patent and trademark information. Issuance of patents provides incentives to invent and invest in new technology by allowing innovators the opportunity to benefit from their discoveries. Registration of trademarks assists businesses in protecting their investments and safeguards consumers against confusion and deception in the marketplace by providing notice of marks in use. Through dissemination of patent and trademark information, the Department promotes a global understanding of IP protection and facilitates the development and sharing of new technologies worldwide.

Performance Outcome: Optimize patent quality and timeliness (USPTO)

The most significant activity under this outcome is the examination of an inventor's application for a patent by comparing the claimed subject matter of the application to a large body of technological information to determine whether the claimed invention is new, useful, and non-obvious to someone knowledgeable in that subject matter.



PATENT QUALITY

Providing quality services and products is USPTO's foremost priority. USPTO's commitment to the continuous refinement and expansion of the quality initiatives is outlined in the 2007-2012 Strategic Plan. Patent examinations are subjected to both end product and in-process reviews that evaluate the quality of the substantive basis for examiner decisions, applicability of publications found by the examiner or the quality reviewer searched cases, evidence, and clarity of communications with applicants. Findings produced by these reviews are shared individually with examiners, collected in a database for ongoing analysis, serve as the basis for the development of training programs, and used to strengthen the review process. Beginning in late 2006, USPTO commenced an intensive effort to better define quality and identify appropriate criteria to gauge quality.

This effort has culminated in plans that will ensure examiners maintain the knowledge and skill levels necessary to perform quality examinations through training and the administration of certification exams.

In January 2006, USPTO launched an academy approach to training entry-level patent examiners aimed at graduating examiners sufficiently skilled to produce quality examinations with reduced oversight. New employees are given in-depth training for up to eight months that combines technical and legal instruction, practical applications, small group study, and one-on-one assistance with real applications. The goal is for competency to improve and attrition of new hires to decrease. A total of 1,727 examiners received training in the Patent Academy in FY 2007.

Two of the measures USPTO uses to gauge patent quality are the patent allowance compliance rate and the in-process examination compliance rate. The patent allowance compliance rate is the percentage of applications allowed by examiners with no errors after being reviewed by the Office of Patent Quality Assurance. An error is defined as at least one claim within a randomly selected allowed application that would be held invalid in a court of law if the application were to issue without the required correction. In FY 2007, efforts to improve quality resulted in an allowance compliance rate of 96.5 percent, slightly better than the target of 96.0 percent.

The in-process examination compliance rate is a ratio derived from the number of office actions void of deficiencies that would significantly impact the applicant's ability to advance the prosecution on the merits of the application, divided by the total number of office actions reviewed. At 92.2 percent in-process examination compliance, USPTO met its goal of 90.0 percent.

The Office of International Relations (OIR) leads the U.S. government delegations to the World Intellectual Property Organization's (WIPO) meetings. OIR developed the proposals and led the negotiations for the Patent Cooperation Treaty (PCT) changes that have resulted in a dramatic reduction in PCT Chapter II processing. The implementation of the PCT Guidelines for Search and Examination has led to improvements in the processing of PCT applications. Because Chapter II demands have dropped, examiner time has been freed up to dedicate to other aspects of the patent workload.

PATENT PENDENCY

The time to process a patent application is measured in two ways: (1) first action pendency—the average time in months from filing until an examiner's initial determination is made of the patentability of an invention, and (2) total pendency—the average time in months from filing until the application issues as a patent, or is abandoned by the applicant.

USPTO strives to meet its goals of reducing pendency through a multi-pronged approach that includes hiring sufficient numbers of new examiners, retention of experienced staff, competitive sourcing where appropriate, exploring work sharing with other patent offices, process reform through revised rules of practice and training. In FY 2007, 1,215 new patent examiners were hired.

Despite USPTO's significant efforts and successes, reducing the length of time for action on patent applications continues to be a key challenge. While the rate of increase for total pendency time slowed in FY 2007, the rate of increase for first action pendency did not. USPTO did not meet its target of 23.7 months (actual of 25.3 months) because there were additional older applications processed than planned. The number of patent applications filed increased by 73 percent between 1995 and 2005 and this trend is expected to continue, reflecting the Nation's strong participation in global business growth and innovation. The Department is committed to achieving long-term reductions in pendency through a combination of hiring, retention, training, and process optimization.

PATENT EFFICIENCY

Patent efficiency measures the relative cost-effectiveness of the entire patent examination process over time, or the efficiency with which the organization applies its resources to production. The cost is calculated by totaling all costs (including direct and indirect) incurred to produce a patent product and dividing the sum by the number of product outputs. The FY 2007 target of \$4,253 was met with an actual of \$3,961.

PATENTS E-PROCESSING

The public Patent Application and Information Retrieval (PAIR) system offers the public an advanced electronic portal for PDF viewing, downloading, and printing an array of information and documents for patent applications not covered by confidentiality laws. Public PAIR also offers a quick-click feature for ordering certified copies of patent applications and application files. The private PAIR system allows applicants access to the file history of their applications.

In March 2006, USPTO fully deployed an enhanced electronic filing system (EFS-Web). The system was designed with extensive applicant input to improve the ease of e-filing. E-filing reduces errors and expedites processing by eliminating the scanning and indexing required for paper applications. USPTO met its FY 2007 goal of 40.0 percent of patent applications filed electronically, by achieving a rate of 49.3 percent (estimated, final by December 2007).

Additionally, USPTO completed the conversion of all paper applications to electronic form, providing desktop access to patent applications by all examiners, support, and management personnel. USPTO has met its target of electronically managing



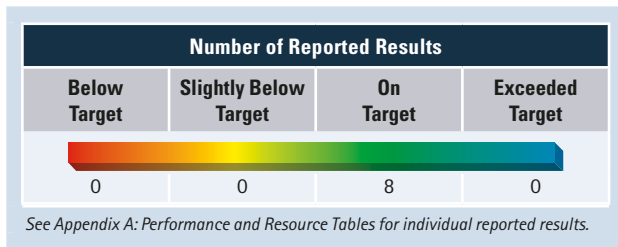
99.9 percent of patent applications. In FY 2007, USPTO enhanced its telecommuting program to remotely provide patent examiners with full access to all patent systems necessary to perform their jobs from home, and added collaborative communication technologies. More than 1,000 patent employees now participate.

OIR continues to develop worksharing initiatives with other patent offices. OIR is part of the USPTO team addressing work sharing initiatives and pilot projects with other major patent offices. Work continues with the European Patent Office (EPO) and the Japan Patent Office (JPO) on work sharing initiatives, with the Patent Prosecution Highway having come online between JPO and USPTO. Successful worksharing will significantly and positively impact the timeliness of patent application processing.

A Memoranda of Agreement (MOA) with EPO and JPO on joint projects was signed. USPTO continuing trilateral efforts on practice issues, worksharing, and examiner exchange initiatives will ultimately lead to improved quality at USPTO. With regard to e-government, e-filing and processing, the ongoing Trilateral and WIPO/SCIT (Standing Committee on Information Technologies) objectives of developing common, compatible, and "interconnectable" tools for electronic filing, processing and access will serve to greatly advance the efficiency of processing patent applications in the United States and throughout the world and of communicating among industrial property offices. This is especially true of the "common application format" initiative within the Patent Trilateral.

Performance Outcome: Optimize trademark quality and timeliness (USPTO)

The fundamental process involved in reaching this outcome is the examination of trademark applications. Trademark attorneys determine registrability under the provisions of the Trademark Act of 1946, as amended. The examination of trademark applications comprises many elements, including the utilization of electronic databases to determine whether the mark in an application is confusingly similar to any pending or registered mark, the preparation of an office action to inform applicants of the attorney's findings, the approval of applications to be published for opposition, and the examination of Statements of Use filed under the Intent to Use provisions of the Trademark Act.



TRADEMARK QUALITY

A vital component of USPTO's commitment to improve the quality of examination is the identification of criteria used to assess the quality of an office action. In order to determine trademark examination quality, first and final examiner search results and actions are evaluated to create a more comprehensive and rigorous review of what constitutes examination quality. More than 350 items are scrutinized to determine "excellent," "satisfactory," and "deficient" work with regard to the examiner's research, critical analysis of the application, and the writing of the office action. The examining attorneys' handling of every substantive and procedural issue is also analyzed comprehensively. These more rigorous criteria have been used to measure quality for the past two years. As a result, the quality of the examiners' work has demonstrably improved.

In FY 2007, the trademark first action compliance rate was 95.9 percent, above the 95.5 percent compliance target. Similarly, the final action compliance rate was 97.4 percent, also better than the 96.0 percent target.

As part of USPTO's commitment to improve the quality of examination and ensure that all examiners possess the knowledge, skills, and abilities necessary to perform at the highest level, examiners are required to take a series of e-learning tutorials. The quality review process allows USPTO to conduct training on the micro level with specific feedback, and also on the macro level with training modules that address trends, targeting topics that warrant improvement.

TRADEMARK PENDENCY

The two primary measures used to determine trademark application processing time are (1) first action pendency, which measures the average time, in months, from the filing date to when the examiner's first action is taken; and (2) final action pendency, which is based on the average time, in months, from the filing date until the notice of abandonment, notice of allowance, or registration for applications based on use. USPTO met its FY 2007 target, 3.7 months, by achieving a first action pendency of 2.9 months. Trademark final action pendency results were 13.4 months, excluding suspended and inter partes cases, and 15.1 months including all cases in FY 2007. USPTO met its FY 2007 target of 15 months excluding suspended and inter partes cases, and 17.3 months including all cases.

TRADEMARK EFFICIENCY

The measure of trademark efficiency is calculated by dividing total USPTO expenses associated with the examination and processing of trademarks (including associated overhead and supporting expenses) by outputs (office disposals). The measure indicates the degree to which USPTO can operate within plan costs relative to outputs produced. The FY 2007 trademark efficiency target of \$685 was met with an actual of \$660.

The strategic plan outlines USPTO's commitment to working with its IP partners to improve the efficiency of its processing systems. The number of applications and communications received and processed electronically has continued to increase and has resulted in more coordinated and streamlined work processes. The continued expansion of electronic file management, when combined with internal process mapping, will allow a more efficient design and control of the work process, provide tools to monitor and better manage the work, measure production and timeliness, and evaluate quality. This greater reliance on electronic systems will, in turn, prepare USPTO for the globalization that characterizes the 21st century economy.

TRADEMARK E-FILE MANAGEMENT

The public may access official trademark files online within days of filing by using the Trademark Document Retrieval (TDR) system. This system grants access to the full file contents of all federally registered and pending trademarks in an electronic PDF format. TDR contains nearly two million pending and registered trademarks dating back to 1885, and represents more than 100 years of marketing creativity. TDR enables the public to download and print an array of information and documents. By allowing public access to interested parties, USPTO is better able to provide timely and useful information to business owners as they develop their marks and prepare to file trademark applications.

The office reached a milestone—more than one million applications have been filed electronically since electronic filing was first piloted nine years ago. The office met the goal for 90.0 percent of trademark applications to be filed electronically by receiving more than 95.4 percent of the applications to register a mark electronically. The trademark electronic filing system has been enhanced by continuing to expand the number and type of transactions that can be completed online and by offering reduced fees to encourage electronic communications. Twenty-five electronic forms are available through the award winning Trademark Electronic Application System (TEAS). Options for reduced fees, system enhancements, PDF attachments, and the availability of forms that permit more electronic transactions have encouraged greater use and acceptance by trademark customers to the point

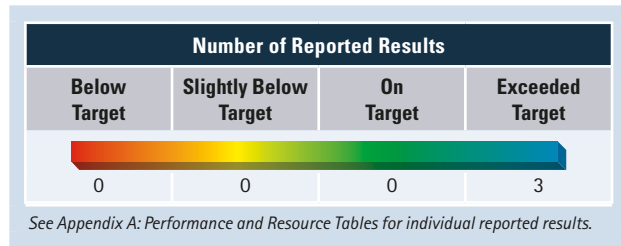


where electronic filing has become the preferred method for communicating on trademark matters. USPTO has consistently met its target of electronically managing 99.0 percent of trademark applications.

OIR continued the Trademark Trilateral work on the identification of classifications for goods and services which should further reduce trademark pendency, as applications, especially those filed from abroad, will be more focused for examination in the United States. The Trademark Trilateral and WIPO/SCIT objectives of developing common, compatible, and "interconnectable" tools for electronic filing, processing, and access will serve to greatly advance the efficiency of processing trademark applications in the United States and throughout the world. The OIR trademark team conducted electronic processing training for trademark examiners in Jordan and the Philippines.

Performance Outcome: Improve intellectual property protection and enforcement domestically and abroad (USPTO)

USPTO continues to work with its IP partners as well as its applicant public to improve its processing systems. Significant progress is being made in the transitioning of its patent and trademark operations to an e-government environment. Currently, all federally registered and pending trademarks are available to the public on USPTO's Web site, www.uspto.gov. On USPTO's Web site, a variety of tasks can be accomplished, including filing electronically for patents and trademark registration, reviewing the status of current applications as needed, tracking the status of a public patent application as it moves from pre-grant publication to final disposition, and reviewing the documents in the official patent application file, including all decisions made by patent examiners.



ADVANCING INTELLECTUAL PROPERTY

USPTO's Office of External Affairs (EA) plays a critical role in the U.S. government's efforts and obligations to provide IP technical assistance throughout the world. In FY 2007, there were 461 instances in which EA experts reviewed IP policies and standards; 17 instances where EA improved worldwide IP expertise for U.S. government interests; and 15 instances where EA initiated or implemented plans of action, mechanisms, or support programs in developing countries.

EA's mission is to promote development of IP systems internationally. Some recent initiatives include collaborating with counterparts in the Chinese government to improve China's intellectual property rights (IPR) administration and enforcement, placing IPR experts in six countries to support Embassy and Consulates on all IPR issues, and establishing USPTO Global Intellectual Property Academy (GIPA) to expand IP training, technical assistance, capacity programs, and activities for foreign government officials. 77 GIPA training programs have been conducted during FY 2007.

EA also manages a hotline (1-866-999-HALT) that helps small and medium-sized businesses leverage the resources of the U.S. government to protect their IPR in the United States and abroad. Callers receive information from a staff of IP attorneys at USPTO with regional expertise on how to secure patents, trademarks, and copyrights, and on enforcement of these rights. In FY 2006, the hotline received 1,460 calls. In FY 2007, USPTO received 1,730 calls through the hotline.

In support of U.S. Trade Representative (USTR) and other U.S. government agencies, USPTO plays a key role in the negotiation and drafting of IP provisions of free trade and other international agreements. These provisions generally require U.S. trading partners to provide stronger, more effective protection for IP than is required under World Trade Organization's (WTO) Trade Related Aspects of Intellectual Property Rights (TRIPS) Agreement. USPTO has participated in numerous negotiating rounds and/or implementing legislation for all recently concluded and ongoing free trade agreements (FTA).

STRATEGIES AND FUTURE PLANS

In 2007, USPTO submitted the 2007-2012 Strategic Plan. The new plan builds on the infrastructure developed in the 21st Century Strategic Plan and outlines specific strategies to meet the goals of optimizing patent quality and timeliness, and improving IP protection and enforcement domestically and abroad.

Strategies to reduce patent pendency and improve patent quality include enhanced recruitment to hire 1,200 new examiners a year for an extended period of time, establishment of a retention bonus program, increased training for new and existing examiners, and the creation of partnerships with universities to groom examiner candidates and increase knowledge of the patent system. Hiring alone will not achieve significant reductions in pendency without accompanying changes to the current one-size-fits-all system of examination. USPTO will, in collaboration with stakeholders, explore the feasibility of offering alternatives to better meet the differing needs of applicants, and more efficiently utilize the Agency's resources.

USPTO will continue to improve and integrate existing electronic systems to promote full electronic patent application processing. This will involve promoting the utilization of electronic text content to facilitate the examination process and increase user acceptance of electronic filing systems. USPTO will provide applicants with expanded opportunities to conduct business with USPTO electronically. USPTO will continue to expand patent examiners' opportunities to participate in the telecommuting program at the rate of more than 500 additional employees annually.

Multiple initiatives will be implemented to improve quality. Examples of quality improvements include involving external stakeholders in defining quality and developing quality metrics and performance targets, assessing the existing process for reviewing examiner work, and externally validating quality data.

USPTO will transform patent appeals and interference processing and workload, and enrollment and discipline functions. This effort will entail enhanced communication and involvement with registered patent practitioners and improvements in the Agency's responsiveness.

USPTO will continue to work on curbing IP theft and strengthening IP protection and enforcement in every corner of the globe. More IP experts will be posted in foreign countries where U.S. IP challenges are the greatest. Training and assistance programs will continue to combat and deter infringement and promote honest business practices in the use and development of IP. In addition, USPTO will continue its intensive national public awareness campaign to help educate small and medium sized businesses, in which participants learn what IPR is, why it is important, and how to protect and enforce these rights.



CHALLENGES FOR THE FUTURE

Achieving the outcome of optimizing patent quality and timeliness presents a broad spectrum of challenges. Congress and the public have recognized that the time it takes USPTO to reach a final decision on a patent application directly impacts U.S. competitiveness. A critical component to achieving the goal of timely, high-quality examinations entails the hiring and retention of more patent examiners. Unfortunately, USPTO must compete with other employers to attract and retain the most talented and sought after individuals.

Optimizing quality first requires accord between USPTO and applicants on the definition of quality and how to measure it. To maintain the U.S. system as the best patent examination system in the world, USPTO must provide applicants with products that protect their IPR while simultaneously facilitating efficient use off USPTO resources. Leveraging new technologies in pursuit of efficiency requires a vision of the examination processes of tomorrow.

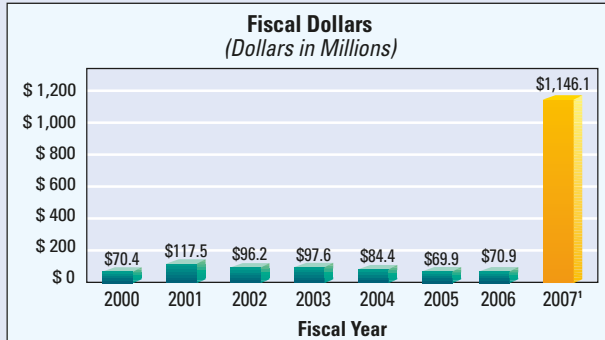
Addressing many of these challenges requires an interrelated approach to ensure that the solution to one challenge does not hamper the remedy of another. USPTO's updated 2007–2012 Strategic Plan provides a set of focused initiatives to ultimately produce solutions to the challenges noted above.

Increasing public awareness of various IP issues and interests and how these affect them is an important aspect of USPTO's role. Educating the public about the examination processes of USPTO and how these relate to the use of IPR in the marketplace will help in that process. Communicating with and informing the public about the intersection of IP issues and the news stories they read everyday will help to generate a better understanding of the role of such rights in the global economy. Promoting an understanding that the violation of IPR affects everyone, and how, will be beneficial to improving the effectiveness of the system as a whole.

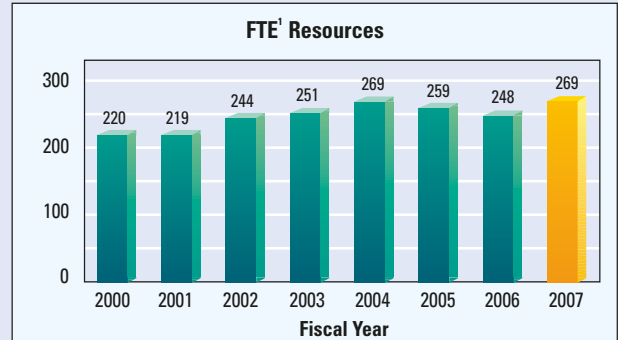
STRATEGIC OBJECTIVE 2.3

Advance the development of global e-commerce and enhanced telecommunications and information services

STRATEGIC OBJECTIVE 2.3 TOTAL RESOURCES



¹In FY 2007, \$1,070.3 was provided to the newly formed Digital Television and Public Safety Program.



¹FTE — Full-Time Equivalent

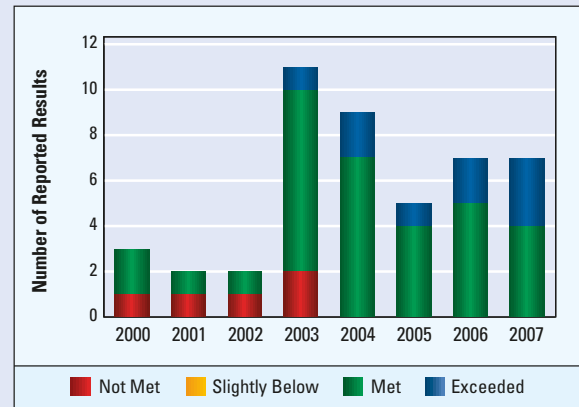
This objective focuses NTIA's role in radio frequency (RF) spectrum management and telecommunications standards; and as an advisor to the President on communications policy matters, on Internet domain names, wireless telecommunications standards and technology, and high-speed Internet services.

Achievement of this objective will continue to further the technological advances for wireless communication, Internet services, domain name management issues, and other advances in technology. A discussion of each performance outcome supporting this objective will further describe the outcomes of this objective.

The Department through NTIA:

- ◆ Serves as the principal adviser to the President on domestic and international communications and information policy-making.

STRATEGIC OBJECTIVE 2.3 PERFORMANCE RESULTS



See Appendix A: Performance and Resource Tables for individual reported results.

PERFORMANCE OUTCOME	TARGETS MET OR EXCEEDED
Ensure that the allocation of radio spectrum provides the greatest benefit to all people (NTIA)	5 of 5
Promote the availability, and support new sources, of advanced telecommunications and information services (NTIA)	2 of 2



- ◆ Promotes access to telecommunications services for all Americans and competition in domestic and international markets.
- ◆ Manages all federal use of the electromagnetic spectrum and generally promotes efficient use of spectrum.
- ◆ Conducts telecommunications technology research, including standards-setting in partnership with business and other federal agencies.

The Agency's expertise encompasses every aspect of telecommunications, including domestic policy, international policy, spectrum management, and technical telecommunications research and engineering.

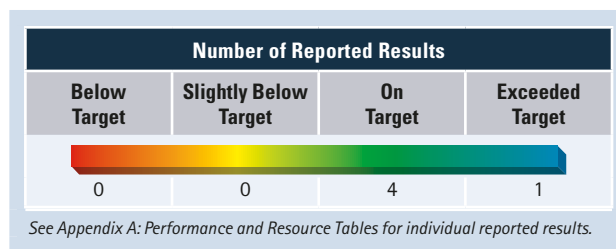
NTIA's responsibilities have expanded considerably with the enactment of the Deficit Reduction Act of 2005. Specifically, the act charged NTIA to administer a number of new one-time programs to be funded from anticipated spectrum auction proceeds associated with the transition to digital television broadcasts through the Digital Television Transition and Public Safety Fund. These programs include the (1) Public Safety Interoperable Communications (PSIC) Grant Program and the Digital-to-Analog Converter Box Coupon Program, and (2) the Low-Power Television (LPTV) and translator digital conversion and upgrade programs.

NTIA also leads Department activities in the areas of next-generation Internet Protocols, ultrawideband (UWB) technology, wireless broadband applications, wireless sensor technologies, and Internet technical functions.

Performance Outcome: Ensure that the allocation of radio spectrum provides the greatest benefit to all people (NTIA)

Advancing broadband and third generation (3G) wireless services.

NTIA examined an array of spectrum management policy issues in FY 2007 dealing with innovative approaches to spectrum management and the effectiveness of current processes. The availability of the RF spectrum is key to the development and implementation of innovative telecommunications technologies.



NTIA coordinated with federal agencies the Spectrum Reform Initiative implementation plan with 54 milestones to be completed by FY 2010. This initiative will fundamentally change the business of spectrum management over the next five years. The purpose of the initiative is to promote the development and implementation of a U.S. spectrum policy that will foster economic growth; ensure U.S. national and homeland security; maintain U.S. global leadership in communications technology development and services; and satisfy other vital U.S. needs in areas, such as public safety, scientific research, federal transportation infrastructure, and law enforcement. One result is the first National Strategic Spectrum Plan. NTIA also established the Department of Commerce Spectrum Management Advisory Committee, which met three times in FY 2007. This committee is comprised of a broad range of stakeholders, including representatives from state, regional, and local sectors; industry; academia; and consumer groups.

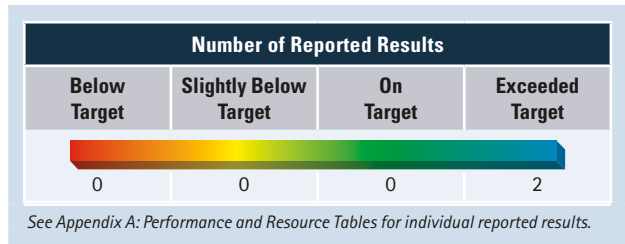
The achievements of this performance outcome are described below:

- ◆ NTIA committed substantial resources in FY 2007 to the development of the first Federal Strategic Spectrum Plan, which is a major result of the Spectrum Reform Initiative. The plan will be released by the end of 2007.
- ◆ NTIA has improved the timeliness of processing frequency assignment requests from a target of 12 business days to less than nine days. This has been accomplished through business process re-engineering and IT improvements. These frequency assignments satisfy the near-term and future spectrum requirements of the 63 federal agencies to operate radio communications that provide the public with national and homeland security, law enforcement, transportation control, natural resource management, and other public safety services during peacetime and emergencies.
- ◆ NTIA published a report on a Washington, D.C. public safety wireless network to evaluate its effectiveness in sharing the radio spectrum with federal, state, and local governments during emergencies. Selection of the Washington, D.C. Wireless Accelerated Responder Network (WARN), an interoperable, city-wide, broadband public safety network fulfills one of the 24 recommendations of the President's 21st Century Spectrum Policy Initiative for improving management of the Nation's airwaves.

Performance Outcome: Promote the availability, and support new sources, of advanced telecommunications and information services (NTIA)

Performing research to improve both the performance of telecommunications networks and the availability of digital content on the Internet.

NTIA participated on behalf of the Administration in Federal Communications Commission (FCC) and Congressional proceedings on telecommunications policies, including the development of appropriate regulatory treatment for broadband services deployment. NTIA made significant progress in implementation of programs required under the Digital Television Transition and Public Safety Fund. A number of Internet related policy issues required NTIA action, including continuing Internet privatization, domain name management both domestically and internationally, next generation Internet Protocols, and the combination of Internet and telecommunications addressing (ENUM). All of these activities required substantial coordination among NTIA's program offices, as well as interagency coordination to develop the Administration's positions.



The achievements of this performance outcome are described below:

- ◆ In March 2007, NTIA published regulations that set forth the framework for the Digital Television Transition Coupon Program and provide guidance to consumers, converter box manufacturers, and retailers wishing to participate in the program. Specifically, the regulations outline requirements related to household eligibility, converter box technical specifications, and retailer certification. On August 17, 2007, NTIA awarded a contract to IBM for end-to-end services to implement and administer the coupon program. IBM, together with three partners, will manage three broad, functional aspects of the coupon program: (1) systems processing (e.g., determining consumer eligibility, distributing and activating coupons, certifying retailers, and providing training materials); (2) financial processing (e.g., administering the processes to authorize coupons for redemption



and ensure payment to retailers, and performing independent auditing); and (3) consumer education and communications. IBM's partners include Corporate Lodging Consultants which will oversee retailer certification and training as well as coupon redemption and payment; Epiq Systems which will handle coupon distribution and customer support; and Ketchum, a global public relations firm that will oversee the consumer education program.

- ◆ On July 18, 2007, U.S. Secretary of Commerce Carlos M. Gutierrez and U.S. Secretary of DHS Michael Chertoff announced the availability of \$968 million in PSIC Grants to help state and local first responders improve public safety communications during a natural or man-made disaster for all 50 states, the District of Columbia, and the U.S. Territories. Grants were awarded by September 30, 2007, and grant projects will be completed in FY 2010. The Digital Television Transition and Public Safety Act of 2005 authorized NTIA, in consultation with DHS to make payments not to exceed \$1 billion in the aggregate through FY 2010 to carry out the PSIC program. The grant program will assist public safety agencies in the acquisition of, deployment of, or training for the use of interoperable communications systems that can utilize reallocated public safety spectrum in the 700 MHz band for radio communication.
- ◆ NTIA, in its role as supervisor of the administration of the country code top-level domain for the United States (usTLD or .us domain) worked with NeuStar to improve the .us locality space by modernizing usTLD locality-based processes, and creating delegated manager and WHOIS databases. NTIA published a Notice of Inquiry and convened a public meeting to seek views on the continued transition of the technical coordination and management of the Internet Domain Name and Addressing System (DNS) to the private sector.
- ◆ NTIA testified before House and Senate Committees about the transition to Digital TV and Public Safety Communications Interoperability.
- ◆ NTIA began extensive preparations for the administration of other programs established by the Digital Television Transition and Public Safety Fund, created by the Deficit Reduction Act of 2005. This fund receives offsetting receipts from the auction of electromagnetic spectrum recovered from discontinued analog television signals, and provides funding for several programs from these receipts. These other programs include the New York City 9/11 Digital Transition, Assistance to LPTV Stations, National Alert and Tsunami Warning Program, and Enhanced 9-1-1 Service Support.
- ◆ During FY 2007, the Public Telecommunications Facilities Program (PTFP) awarded \$22,450,416 to fund 118 projects, including 24 grants so 18 public radio stations and six public television stations can purchase standby generators to enable the stations to continue public service programming during times of emergency. Sixteen radio projects for \$2,167,338 will extend new public broadcasting service to over 200,000 people and provide additional service to almost 750,000 people. Sixteen projects for \$802,604 will assist in the digital conversion of public radio stations. Forty-eight digital television conversion grants were awarded for \$15,012,071 to recipients in 32 states and territories. One grant, to WYES-TV, New Orleans, will replace production and associated equipment which was damaged by Hurricane Katrina. A planning grant will conduct a comprehensive nationwide study of public television digital coverage, necessitated by the change in the service area of many public television stations due to the shut-off of analog signals in February 2009. The University of Hawaii/PEACESAT received an award of \$499,351 to continue distance education, videoconferencing, and medical services to Pacific island nations and U.S. territories.

The data used to evaluate the effectiveness of performance outcome achievements are reviewed quarterly and the Department attests to the accuracy and reliability of the data. Data on the timeliness of processing frequency assignment requests are maintained by the Office of Spectrum Management. All other data are published on the NTIA Web site. NTIA examined an array of spectrum management policy issues in FY 2007 dealing with innovative approaches to spectrum management and the effectiveness of current processes.

STRATEGIES AND FUTURE PLANS

NTIA will direct the bulk of NTIA's resources toward achieving the President's goal of spectrum management reform. NTIA will facilitate a modernized and improved spectrum management system and facilitate economic incentives for more efficient and beneficial use of spectrum. NTIA's other spectrum management activities include:

- ◆ Identifying and supporting new wireless technologies that promise innovative applications for customers of the federal and private sectors.
- ◆ Providing the 63 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.
- ◆ Developing plans and policies to use the spectrum effectively.
- ◆ Satisfying U.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.
- ◆ Improving, through telecommunications research and engineering, the understanding of radio-wave transmission thereby improving spectrum utilization and the performance of radio-communications systems.

NTIA will also work with DHS on the development of standards for the interoperability of public safety systems and on the continuing implementation of Spectrum Relocation Fund legislation. NTIA will continue work with the Department of Transportation (DOT) on implementation of the Enhanced 911 Act. NTIA will continue work with the Internet Corporation for Assigned Names and Numbers (ICANN) on the management of the Internet DNS. NTIA anticipates that it will participate on behalf of the Administration in a Congressional examination of the Telecommunications Act focusing on telephony subsidy reform and the classification of advanced broadband services. NTIA will also participate on behalf of the Administration in Digital TV transition policy-making and implementation of Internet Protocol Version 6 (IPv6).

CHALLENGES FOR THE FUTURE

In today's era of modern communications, RF spectrum is critical. Current spectrum management policies are under increasing strain as the demand for existing spectrum-based services grows and new spectrum-related technologies and applications emerge. Working with all affected parties in the federal government and the private sector, NTIA and the Department must find ways to implement the recommendations developed through the President's Spectrum Policy Initiative to foster economic growth; ensure U.S. national and homeland security; maintain U.S. global leadership in communications technology development and services; and satisfy other vital U.S. needs in areas such as public safety, scientific research, federal transportation infrastructure, and law enforcement. Also, NTIA and the FCC must coordinate the development of a National Strategic Spectrum Plan.

NTIA and the Department must also continue promotion of universal and affordable broadband access. Some of the most promising new broadband technologies are wireless. By expanding the amount of spectrum available for commercial uses, the Department will increase high-speed Internet access. In an era of rapidly changing new technologies, like mobile wireless, high-speed fiber optics, and expanded broadband deployment, government policies should favor customer choice. Regulatory stability in the telecommunications sector will promote both competition and investment. Developing these policy frameworks to support these goals is the challenge facing NTIA and the Department.