U.S. DEPARTMENT OF COMMERCE

National Telecommunications and Information Administration

FY 2013 Budget as Presented to Congress

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DEPARTMENT OF COMMERCE
NATIONAL TELECOMMUNICATIONS AND INFORMATION ADMINISTRATION
Budget Estimates, Fiscal Year 2013
Budget as Presented to Congress

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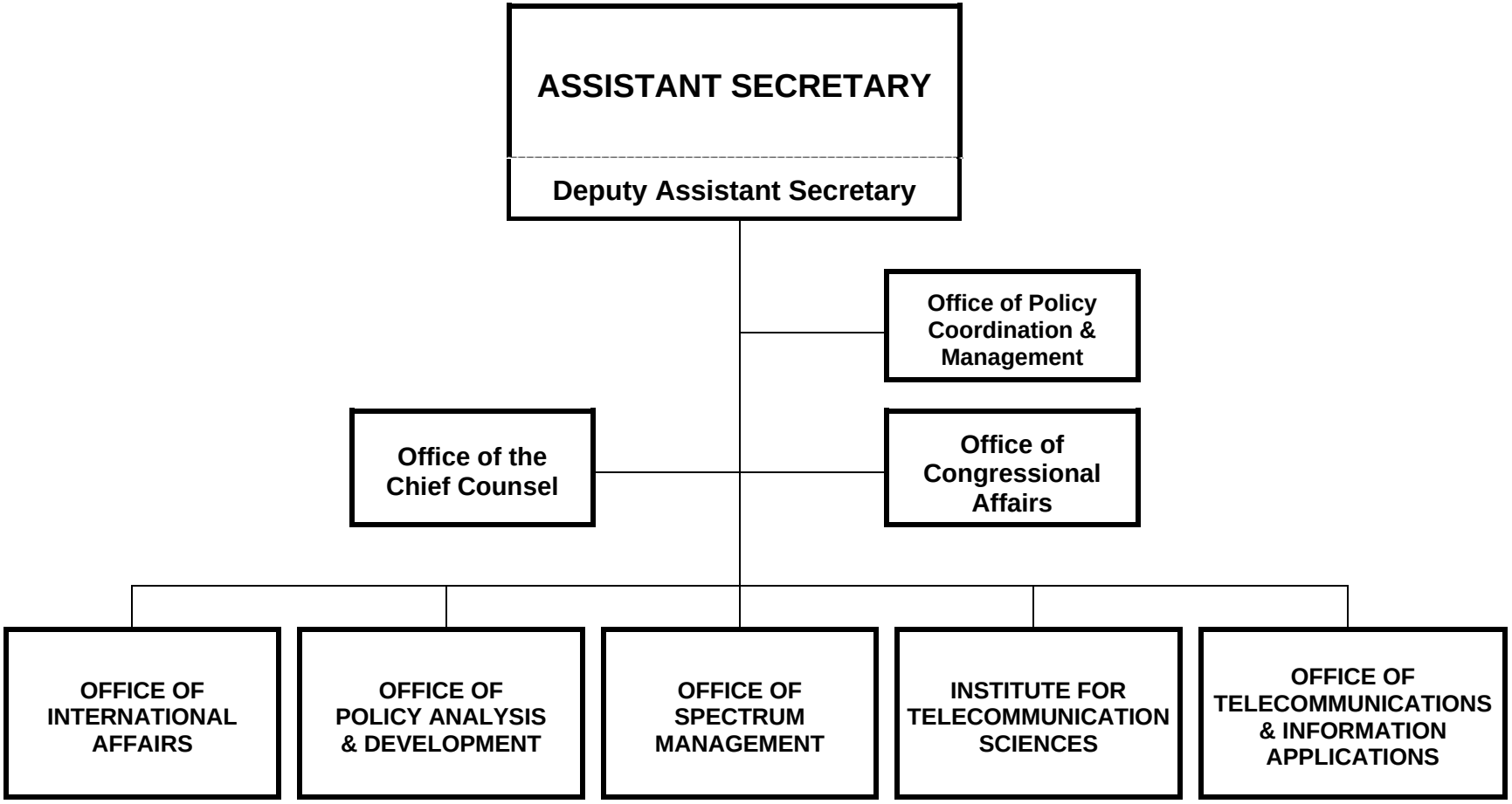
NATIONAL TELECOMMUNICATIONS AND INFORMATION ADMINISTRATION



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Department of Commerce
National Telecommunications and Information Administration
Fiscal Year 2013 Budget

Executive Summary

The National Telecommunications and Information Administrations (NTIA) is responsible for: leading the development of domestic and international telecommunications and information policy for the Executive Branch; ensuring the effective and efficient use of Federal radio spectrum; performing state-of-the-art telecommunications research, engineering, and planning; and administering Federal grant programs that promote the use of innovative technology for expanding the use of the Internet, creating jobs and improving public safety.

The NTIA FY 2013 budget request for Salaries and Expenses is $46.9 million, an increase of $1.3 million from the enacted FY 2012 Budget. The slight increase will provide ongoing support to NTIA's largest grant program, enhance efforts to support economic growth by continuing work to identify additional spectrum for commercial use, and fund efforts to address emerging Internet policy issues.

In addition, the Administration is continuing its pursuit of an aggressive government-wide effort to curb non-essential administrative spending. As a result, the Department of Commerce continues to seek ways to improve the efficiency of programs without reducing their effectiveness. Building on NTIA's administrative savings planned for FY 2012 ($0.62 million), an additional $0.14 million in savings is targeted for FY 2013 for a total savings in FY 2013 of $0.8 million. For additional information, see the Administrative Savings section of the Introduction to the Budget in Brief.

This Budget request reflects and recognizes the need for sustainable spending within the Federal Government. In FY 2013, NTIA's policy, spectrum management, and research programs will support emerging technologies and uses of spectrum resources for affordable, alternative communications services. Promising technologies and services have the potential to drive the new economy by improving communication and enabling the sharing and application of information resources. The Administration and NTIA support the advancement of information technologies and have moved aggressively to create an economic and regulatory environment in which innovations can flourish.

This request seeks an additional $931,000 to increase NTIA's policy-related activities for promoting the internet as a key driver in the creation of enterprises and communities. Harnessing the potential of the internet as an economic engine will be critical for U.S. business and industries. In order to maintain the United States' leadership role for this dynamic sector, NTIA will direct and coordinate federal activities to address important policy issues threatening the expansion of Internet commerce, such as cyber security, online copyright protection, and user privacy. Resolution of these issues will empower consumers, protect transactions, and create new opportunities for economic growth.

NTIA will continue to support wireless broadband access with an increase of $1.2 million and implementation of the President's Executive Memorandum dated June 28, 2010, which charged NTIA with identifying and making available 500 MHz of Federal and nonfederal spectrum suitable for both mobile and fixed wireless broadband use during the next 10 years. NTIA will analyze, identify, monitor, and report on making the 500 MHz available. To achieve this goal, NTIA will explore opportunities for developing new spectrum access approaches and technologies and use its test-bed to assess devices that could promote spectrum sharing.

In FY 2013, NTIA will restructure its research program and laboratory core capabilities around projects that yield the highest benefits and advance National goals in the areas of broadband deployment, spectrum management, public safety, and technology innovation. NTIA's Institute for Telecommunications Sciences is the only Federal telecommunications laboratory capable of providing NTIA, Federal agencies, and the telecommunications industry with impartial and technically sound measurement data and propagation models. NTIA's restructuring efforts will reduce this request by $1.7 million from the FY 2012 enacted level.

In support of the President's National Wireless Initiative, the Budget proposes to establish a $7 billion program to develop a nationwide interoperable public safety broadband network in the 700 MHz band. NTIA will begin implementation of the program in FY 2013 and administer it for ten years. The program will be fully offset by expected proceeds from anticipated spectrum auctions to be conducted by the Federal Communications Commission (FCC) and deposited in the Public Safety Trust Fund. Additionally, there would be an Incentive Auction Relocation Fund that is estimated to distribute $500 million to help cover the relocation costs of TV broadcasters resulting from the incentive auctions. Finally, NTIA will administer a $200 million State and Local Implementation Grant Program to support network planning.

NTIA will continue to support the oversight of more than $4.2 billion in awarded broadband grants to expand broadband service to communities in a cost-effective manner that maximizes impacts on economic growth, education, health care, and public safety. For FY 2013, NTIA requests a slight budget increase of almost $1 million to maintain contractor support for the program. Approximately half of the oversight services required to ensure proper monitoring and technical support for the grants are provided through the contract. As the grants move toward their completion, these resources will help to ensure project completion and the recovery of unused funds during the grant closeout period. NTIA expects most projects to be completed by the end of the fiscal year.

The Public Telecommunications Facilities Planning and Construction Program was terminated in FY 2011. NTIA will continue to close out the grants in FY 2013.

The Department of Commerce and NTIA have great responsibility in FY 2013 and beyond: management of a $4.2 billion grant portfolio, the creation of economic potential through astute management of the Nation's spectrum resources, and the leadership role in the fast-growing broadband and Internet world. This budget puts forth a realistic plan to manage NTIA's responsibility while recognizing the need for thoughtful, sustainable Federal spending.

2013 Annual Performance Plan Formulation

National Telecommunications and Information Administration

Section 1 Mission Statement

The National Telecommunications and Information Administration (NTIA) serves as the President's principal adviser on telecommunications and information policy matters and develops forward-looking spectrum policies that ensure efficient and effective spectrum access and use.

NTIA manages all spectrum use by Federal departments and agencies and examines how the radio frequency spectrum is used and managed in the United States. A large part of NTIA's policy activities is devoted to making spectrum use more efficient. NTIA will administer its grant programs, such as the Broadband Technology Opportunities Program (BTOP), in a manner consistent with the Administration's goals of stimulating the U.S. economy and promoting job growth. Both domestically and internationally, NTIA will foster and encourage competition and universal service in telecommunications and information services, promote broadband deployment, and advance the Administration's positions on policy issues affecting the Internet, including Internet governance and adoption. NTIA's research laboratory, the Institute for Telecommunication Sciences (ITS), will perform telecommunications research, conduct cooperative research and development with U.S. industry and academia, and provide technical engineering support to NTIA and to other Federal agencies. NTIA's policy, spectrum management, and research programs will support emerging technologies and uses of spectrum resources for affordable, alternative communications services.

Section 2 Corresponding DOC Themes

ECONOMIC GROWTH -- INNOVATION AND ENTREPRENEURSHIP GOAL: Develop the tools, systems, policies, and technologies critical to transforming our economy, fostering U.S. competitiveness, and driving the development of new businesses.

Objective 4. Drive innovation by supporting an open global Internet and through communications and broadband policies that enable robust infrastructure, ensure integrity of the system, and support e-commerce.

NTIA serves as the President's primary policy advisor on domestic and international telecommunications and information issues and acts as the Administration's primary voice on them. NTIA fulfills this role in a number of ways: by advocating globally for foreign regulatory and policy regimes that encourage competition and innovation; preparing and issuing special reports on topics of broad interest; providing the Administration's views on actions proposed by the Federal Communications Commission (FCC) and Federal Trade Commission (FTC); issuing requests for public input on specific issues; and encouraging dialogue with the private sector through sponsorship and participation in conferences, workshops, and other forums. NTIA also directly benefits the American public by promoting universal, affordable availability of advanced telecommunications such as broadband and wireless services and Internet-related technologies and by facilitating national and homeland security, public safety, and scientific research. NTIA also has a new program to support the creation of a Public Safety Broadband Network that will permit interoperability of public safety equipment nationwide, using spectrum in the 700 MHz band. The program will be administered over several years and will be offset by new spectrum auctions.

Additionally, NTIA participates on behalf of the Administration in other proceedings related to telecommunications and information policy, including Internet governance, domain name management, and the core issues of privacy policy, child protection and freedom of expression, and cybersecurity. All of these activities engage other government agencies, both in the Department of Commerce and throughout the Federal government, as well as Internet constituencies in the commercial world, civil society, and academia. All of these activities require substantial coordination among NTIA's program offices, as well as interagency coordination to develop the Administration's positions.

U.S. policies must ensure that radio spectrum is used efficiently and fairly to promote the best interests of the public. 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. The nation's spectrum policies must keep pace with new technologies and demands on the resources while ensuring that essential government missions are maintained. Under the National Wireless Initiative, NTIA will find over the next 10 years 500 MHz of Federal and non-Federal spectrum suitable for both mobile and fixed wireless, broadband use. NTIA will work in conjunction with the FCC in recovering and reallocating spectrum, updating 20th century spectrum policies, and providing adequate incentives and assistance to enable Federal agencies or affected entities to make up to 500 MHz (in bandwidth) available.

In addition to fostering greater availability and use of broadband technologies, BTOP, which was funded by the American Recovery and Reinvestment Act of 2009, is helping to jump-start economic growth, create jobs, and lay the foundation for long-term prosperity for all Americans. The goal of this program is to improve broadband services in unserved and underserved areas of the United States, ensure that every American may benefit from broadband technologies, and enhance America's competitiveness through advances in broadband speeds, deployment, and adoption. The Recovery Act also required NTIA to use a portion of these funds for the purpose of developing a map of broadband services in the United States. All BTOP and mapping grants were obligated before the end of FY 2010. Among other things, NTIA must ensure that projects

supported by BTOP funds are substantially completed within two years, fully completed within three years, and that funds are used by recipients in an efficient, expeditious, and competent manner.

***ECONOMIC GROWTH* -- TRADE PROMOTION AND COMPLIANCE GOAL:** Improve our global competitiveness and foster domestic job growth while protecting American security.

Objective 11. Develop and influence international standards and policies to support the full and fair competitiveness of the U.S. information and communications technology sector.

NTIA serves as the President's primary policy advisor on domestic and international telecommunications and information issues and acts as the Administration's primary voice on them. NTIA fulfills this role in part by advocating globally for foreign regulatory and policy regimes that encourage competition and innovation and by encouraging dialogue with the private sector through sponsorship and participation in conferences, workshops, and other forums. NTIA pursues policies promoting international trade in telecommunications products and services, promoting consistent international approaches to telecommunications policies, and improving relations with countries with rapidly expanding markets.

NTIA is also responsible for coordinating the Federal government's participation in the International Telecommunication Union's (ITU) World Radiocommunication Conferences (WRC) and related national and international meetings. NTIA works with the FCC, which represents the civil spectrum community, and the State Department, to create United States Preliminary Views and Proposals for the WRCs.

SCIENCE AND INFORMATION THEME and GOAL: Generate and communicate new, cutting-edge scientific understanding of technical, economic, social, and environmental systems.

Objective 13. Increase scientific knowledge and provide information to stakeholders to support economic growth and to improve innovation, technology, and public safety.

In addition to its policy-related activities, NTIA supports innovative telecommunications and information technologies through basic research performed at its laboratory, the Institute for Telecommunication Sciences (ITS). ITS performs extensive basic research on quality of digital speech, audio and video compression, and transmission characteristics. This research has the potential to improve both the performance of telecommunications networks and the availability of digital content on the Internet. ITS research also supports U.S. positions in international standards-setting bodies and NTIA's development of Administration policies related to the introduction of new technologies.

Section 3 Impact of Recovery Act

The American Recovery and Reinvestment Act of 2009 (Recovery Act, Public Law No. 111-5) appropriated $4.7 billion to NTIA to provide grants for broadband initiatives throughout the United States.[1] The Recovery Act instructed NTIA to establish the Broadband Technology Opportunities Program (BTOP), a grant program providing access to broadband in unserved areas of the United States; improving access in underserved areas; providing broadband

[1] P.L. 111-226 rescinded $302 million.

technologies to schools, hospitals, libraries and other strategic institutions; improving broadband capabilities for public safety agencies; and stimulating demand for broadband.

Section 4 Priorities and Management Challenges

NTIA's responsibilities in FY 2013 and beyond include continuing management of more than $6 billion in grants, the creation of economic potential through astute management of the Nation's spectrum resources, and a leadership role in the fast-growing broadband and Internet world. A major portion of NTIA's activities in FY 2012 and 2013 will be directed toward achieving the President's goals in the Recovery Act through the continuing administration and execution of BTOP. The size and scope of BTOP demand significant NTIA attention to managing staff and resources. Significant NTIA resources will also be devoted to ensuring the safety, stability, and security of the Internet via advocacy with regard to Internet governance and cybersecurity, both domestically and internationally.

The Secretary of Commerce established Internet policy issues as a top priority. The Internet Policy Task Force will identify leading public policy and operational challenges in the Internet environment. The Task Force leverages expertise across many bureaus, including those responsible for domestic and international information and communications technology policy, international trade, cyber security standards and best practices, intellectual property, business advocacy, and export control.

Under the National Wireless Initiative, NTIA will support efforts to make spectrum available for fixed and mobile wireless broadband. The President directed that adequate funding and incentives be provided to accomplish these actions. This includes efforts to improve spectrum sharing between Federal and non-Federal users as a means of improving spectrum efficiency. In addition, NTIA will support efforts to build a public safety broadband network to provide the Nation's first responders with communication interoperability and additional spectrum in the 700 MHz band.

Objective 4 – Drive innovation by supporting an open global Internet and through communications and broadband policies that enable robust infrastructure, ensure integrity of the system, and support e-commerce.						
Measure: Update the Spectrum Inventory first established in FY2011	**FY 2008 Actual**	**FY 2009 Actual**	**FY 2010 Actual**	**FY 2011 Actual**	**FY 2012 Target**	**FY 2013 Target**
	New	New	New	Completed initial version of Spectrum Inventory	Spectrum Inventory Update	Spectrum Inventory Update
Description: NTIA will develop and maintain, in an understandable, written, and web-based form, a Spectrum Inventory and other information that describe Executive Branch spectrum use. The spectrum inventory is needed to inform spectrum-management policy decision-makers and technology innovators. System characteristics and assignment data will be used to determine spectrum/geographic areas that are underutilized or vacant. With advice and support from the Federal agencies through the Interdepartment Radio Advisory Committee (IRAC), and the Commerce Spectrum Management Advisory Committee (CSMAC), other improvements will be implemented as necessary to ensure the efficiency and effectiveness of spectrum management processes.						
Comments on Changes to Targets: N/A						
Relevant Program Change(s): N/A	**Title:** N/A					**Exhibit 13 Page no:** N/A

Validation and Verification

Data Source	Frequency	Data Storage	Internal Control Procedures	Data Limitations	Actions to be Taken
NTIA Office of Spectrum Management (OSM)	Monthly, Annually	OSM, Associate Administrator	NTIA document clearance process, IRAC clearance process, OMB/Interagency clearance process	Need to protect classified data	None

Objective 4 – Drive innovation by supporting an open global Internet and through communications and broadband policies that enable robust infrastructure, ensure integrity of the system, and support e-commerce.

Measure: Identify up to 500 MHz of spectrum to support commercial broadband services or products	FY 2008 Actual	FY 2009 Actual	FY 2010 Actual	FY 2011 Actual	FY 2012 Target	FY 2013 Target
	New	New	New	New	Meet 66% of annual milestones regarding the identification of 500 MHz for wireless broadband	Meet 66% of annual milestones regarding the identification of 500 MHz for wireless broadband

Description: NTIA is undertaking tasks in collaboration with the FCC to make available a total of 500 MHz (in bandwidth) of spectrum to support wireless broadband services or products over the next 10 years. The Ten-Year Plan and Timetable, developed with input from other Federal agencies and the FCC, identifies over 2,200 MHz of spectrum for evaluation, establishes a process for evaluating these candidate bands and lays out the steps necessary to potentially make the selected spectrum available for wireless broadband services. This work will also include regular progress reports. The Ten-Year Plan includes annual milestones to be achieved in order to complete this complex project.

Comments on Changes to Targets: N/A

Relevant Program Change(s): N/A	Title: N/A	Exhibit 13 Page no: N/A

Validation and Verification

Data Source	Frequency	Data Storage	Internal Control Procedures	Data Limitations	Actions to be Taken
NTIA Office of Spectrum Management (OSM)	Monthly, Annually	OSM, Associate Administrator	NTIA document clearance process, OMB/Interagency clearance process	None	None

Objective 4 – Drive innovation by supporting an open global Internet and through communications and broadband policies that enable robust infrastructure, ensure integrity of the system and support e-commerce.						
Measure: Miles of broadband networks deployed (Infrastructure Projects) [Note: This is a High Priority Performance Goal]	**FY 2008 Actual**	**FY 2009 Actual**	**FY 2010 Actual**	**FY 2011 Actual**	**FY 2012 Target**	**FY 2013 Target**
	New	New	New	29,191 miles	50,000 miles	75,000 miles
Description: BTOP is funding projects that provide broadband service in unserved areas and enhance broadband service in underserved areas of the United States. The BTOP portfolio of projects initially included 123 infrastructure projects totaling $3.5 billion in Federal grant funds to construct broadband networks and to connect "community anchor institutions" such as schools, libraries, hospitals, and public safety facilities. BTOP infrastructure projects are deploying a variety of technologies and approaches to enhance the Nation's broadband capabilities. This measure's target is the cumulative total number of miles of network (e.g., fiber, microwave) deployed using BTOP funding. The Recovery Act provided all funding for BTOP grants.						
Validation and Verification						
Data Source	Frequency	Data Storage	Internal Control Procedures	Data Limitations	Actions to be Taken	
Grantee reports	Quarterly	BTOP Post-Award Management (PAM) Tool	Inspection of data, site visits	Reporting errors on the part of grantees	Collection of data	

Objective 4 – Drive innovation by supporting an open global Internet and through communications and broadband policies that enable robust infrastructure, ensure integrity of the system and support e-commerce.						
Measure: Community anchor institutions connected (Infrastructure Projects) [Note: This is a High Priority Performance Goal]	**FY 2008 Actual**	**FY 2009 Actual**	**FY 2010 Actual**	**FY 2011 Actual**	**FY 2012 Target**	**FY 2013 Target**
	New	New	New	4,163	10,000	15,000
Description: The Recovery Act places a high priority on deploying and enhancing broadband capabilities for community anchor institutions such as libraries, hospitals, schools, and public safety entities. The BTOP portfolio of projects initially included 123 infrastructure projects totaling $3.5 billion in Federal grant funds to construct broadband networks and to connect "community anchor institutions" such as schools, libraries, hospitals, and public safety facilities. This measure's target is the cumulative total number of anchor institutions connected with new or improved broadband capabilities. The Recovery Act provided all funding for BTOP grants.						

Validation and Verification					
Data Source	Frequency	Data Storage	Internal Control Procedures	Data Limitations	Actions to be Taken
Grantee reports	Quarterly	BTOP Post-Award Management (PAM) Tool	Inspection of data, site visits	Reporting errors on the part of grantees	Collection of data

Objective 4 – Drive innovation by supporting an open global Internet and through communications and broadband policies that enable robust infrastructure, ensure integrity of the system and support e-commerce.						
Measure: New and upgraded public computer workstations (Public Computer Centers Projects) [Note: This is a High Priority Performance Goal]	**FY 2008 Actual**	**FY 2009 Actual**	**FY 2010 Actual**	**FY 2011 Actual**	**FY 2012 Target**	**FY 2013 Target**
	New	New	New	24,512	35,000	35,000
Description: BTOP grants are funding expansion of public computer-center capacity. The BTOP portfolio of projects initially included 66 public computer center (PCC) projects totaling $201 million in Federal grant funds to provide access to broadband, computer equipment, computer training, job training, and educational resources to the public and specific vulnerable populations. This measure's target is the cumulative total number of new and improved computer workstations funded through the BTOP Public Computer Centers category of funding. The Recovery Act provided all funding for BTOP grants.						
Validation and Verification						
Data Source	Frequency	Data Storage	Internal Control Procedures	Data Limitations	Actions to be Taken	
Grantee reports	Quarterly	BTOP Post-Award Management (PAM) Tool	Inspection of data, site visits	Reporting errors on the part of grantees	Collection of data	

Objective 4 – Drive innovation by supporting an open global Internet and through communications and broadband policies that enable robust infrastructure, ensure integrity of the system and support e-commerce.						
Measure: New household and business subscribers to broadband (Sustainable Broadband Adoption Projects) [Note: This is a High Priority Performance Goal]		**FY 2008 Actual**	**FY 2009 Actual**	**FY 2010 Actual**	**FY 2011 Actual**	**FY 2012 Target**	**FY 2013 Target**
		New	New	New	230,755	350,000	500,000
Description: The BTOP portfolio of projects initially included 44 sustainable broadband adoption (SBA) projects totaling $250.7 million in Federal grant funds to support innovative projects that promote broadband adoption, especially among vulnerable population groups where broadband technology traditionally has been underutilized. This measure's target is the cumulative total number of new household and business subscribers to broadband generated by projects funded through the BTOP Sustainable Broadband Adoption category of funding, as reported by awardees.						
Validation and Verification						
Data Source	Frequency	Data Storage	Internal Control Procedures		Data Limitations	Actions to be Taken
Grantee reports	Quarterly	BTOP Post-Award Management (PAM) Tool	Inspection of data, site visits		Reporting errors on the part of grantees	Collection of data

Objective 11 – Develop and influence international standards and policies to support the full and fair competitiveness of the U.S. information and communications technology sector.

Measure: 75% of NTIA positions substantially adopted or successful at international meetings	FY 2008 Actual	FY 2009 Actual	FY 2010 Actual	FY 2011 Actual	FY 2012 Target	FY 2013 Target
	New	New	New	95% of NTIA positions substantially adopted/ successful at international meetings	75% of NTIA positions substantially adopted/ successful at international meetings	75% of NTIA positions substantially adopted/ successful at international meetings

Description: NTIA will develop and provide the Federal Government's positions and proposals necessary for technical and policy forums and meetings. This measure encompasses the completion of technical studies and preparation of draft proposals representing Federal agency views to prepare the U.S. proposals to WRC-12. NTIA also will promote acceptance of U.S. positions and proposals internationally by representing U.S. interests at regional telecommunications meetings, bilateral meetings, and conferences.

Comments on Changes to Targets: N/A

Relevant Program Change(s): N/A	Title: N/A	Exhibit 13 Page no: N/A

Validation and Verification

Data Source	Frequency	Data Storage	Internal Control Procedures	Data Limitations	Actions to be Taken
NTIA Office of Spectrum Management (OSM), Office of International Affairs (OIA)	Monthly, Annually	OSM, OIA, Associate Administrators	NTIA document clearance process, OMB/Interagency clearance process	None	None

Objective 13 – Increase scientific knowledge and provide information to stakeholders to support economic growth and to improve innovation, technology, and public safety.						
Measure: Annual Progress Report on the Test-Bed	**FY 2008 Actual**	**FY 2009 Actual**	**FY 2010 Actual**	**FY 2011 Actual**	**FY 2012 Target**	**FY 2013 Target**
				Published Annual Report	Publish Annual Report	Publish Annual Report
Description: NTIA, in coordination with the Federal Communications Commission (FCC) and other Federal agencies, has established a Spectrum Sharing Innovation Test-Bed (Test-Bed) pilot program to examine the feasibility of increased sharing between Federal and non-Federal users. To fulfill the objectives being set out by an Executive Memorandum from the President, the program will expand research into spectrum-sharing technologies, such as Dynamic Spectrum Access, which can be made as a part of the overall plan in making 500 MHz of spectrum available. As part of the pilot program, NTIA engineers will develop performance-monitoring tools, models, and measuring techniques that can accurately evaluate spectrum-sharing technologies and techniques. The goal of the pilot program is to develop the necessary policies and spectrum-management strategies to promote the development of this potentially flexible and innovative approach to spectrum access.						
Comments on Changes to Targets: N/A						
Relevant Program Change(s): N/A	**Title:** N/A				**Exhibit 13 Page no:** N/A	

Validation and Verification					
Data Source	Frequency	Data Storage	Internal Control Procedures	Data Limitations	Actions to be Taken
NTIA Office of Spectrum Management (OSM)	Monthly, Annually	OSM, Associate Administrator	NTIA document clearance process, OMB/Interagency clearance process	None	None

Section 5 Previous Measures

Objective x:						
	FY2008 Actual	FY2009 Actual	FY2010 Actual	FY2011 Actual	FY2012 Target	FY2013 Target
N/A						

Section 6 FY 2013 Program Changes

Program Changes?	Program Name	Accompanying APP Page No.	GPRA Performance Measure Name and Number	Base FTEs	Base Amount	Increase/Decrease FTEs	Increase/Decrease Amount	Exhibit 12-15 Page No.
Yes	Domestic and International Policies	14	Measure 7: 75% of NTIA positions substantially adopted or successful at international meetings	26	$5,418,000	5	$931,000	39
Yes	Spectrum Management	10	Measure 2: Identify up to 500 MHz of spectrum to support commercial broadband services or products	32	$7,560,000	0	($377,000)	65
Yes	Wireless Broadband (500 MHz)	10	Measure 2: Identify up to 500 MHz of spectrum to support commercial broadband services or products	0	$0	5	$1,234,000	69
Yes	Telecommunication Sciences Research Base Reduction	15	Measure 8: Annual Progress Report on the Test-Bed	49	$7,151,000	(7)	($1,886,000)	85

Program Changes?	Program Name	Accompanying APP Page No.	GPRA Performance Measure Name and Number	Base FTEs	Base Amount	Increase/Decrease FTEs	Increase/Decrease Amount	Exhibit 12-15 Page No.
Yes	Broadband Programs	11-13	4 BTOP measures	40	$25,898,000	(4)	$996,000	93

Section 7 Resource Requirements (Dollars in Thousands)

Objective 4: Drive innovation by supporting an open global internet and through communications and broadband policies that enable robust infrastructure, ensure integrity of the system, and support e-commerce.

	FY 2008 Actual	FY 2009 Actual	FY 2010 Actual	FY 2011 Actual	FY 2012 Enacted	FY 2013 Base	Increase/ Decrease	FY 2013 Request
Salaries & expenses	25,967	27,096	30,145	59,333	68,236	58,501	1,131	59,632
Domestic and international policies	2,987	3,211	3,578	4,118	4,634	4,064	698	4,762
Spectrum management	22,296	23,178	25,826	32,576	36,788	27,792	(469)	27,323
Telecommunication sciences research	683	708	741	842	1,132	748	(94)	653
Broadband Programs	0	0	0	21,796	25,682	25,898	996	26,894
Digital Television Transition and Public Safety Fund	942,432	593,842	54,059	57,955	2,386	0	0	0
Broadband Technology Opportunities Program (ARRA)	0	77,477	4,287,827	0	0	0	0	0
Grants	0	325	4,248,380	0	0	0	0	0
Program management	0	77,152	39,447	0	0	0	0	0
Digital To Analog Converter Box Program (ARRA)	0	418,341	1,258	0	0	0	0	0
Public Telecommunications Facilities, Planning, and Construction	21,020	20,943	22,914	1,210	3,854	0	0	0
Grants	19,067	19,005	21,182	0	0	0	0	0
Program management	1,953	1,938	1,732	1,210	3,854	0	0	0
Information Infrastructure Grants	323	205	101	170	681	0	0	0
Grants	0	0	0	0	0	0	0	0
Program management	323	205	101	170	681	0	0	0
Total funding	989,742	1,137,904	4,396,304	118,668	75,157	58,501	1,131	59,632
FTE	141	144	179	168	170	166	3	169

Objective 11: Develop and influence international standards and policies to support the full and fair competitiveness of the U.S. information and communications technology sector.

	FY 2008 Actual	FY 2009 Actual	FY 2010 Actual	FY 2011 Actual	FY 2012 Enacted	FY 2013 Base	Increase/ Decrease	FY 2013 Request
Salaries & expenses	1,615	1,714	1,910	2,278	2,567	2,127	220	2,346
Domestic and international policies	996	1,070	1,193	1,373	1,545	1,355	233	1,587
Spectrum management	619	644	717	905	1,022	772	(13)	759
Telecommunication sciences research	0	0	0	0	0	0	0	0
Total funding	1,615	1,714	1,910	2,278	2,567	2,127	220	2,346
FTE	8	8	8	9	10	10	1	11

Objective 13: Increase scientific knowledge and provide information to stakeholders to support economic growth and to improve innovation, technology, and public safety.

	FY 2008 Actual	FY 2009 Actual	FY 2010 Actual	FY 2011 Actual	FY 2012 Enacted	FY 2013 Base	Increase/ Decrease	FY 2013 Request
Salaries & expenses	21,032	21,821	23,412	27,760	34,790	24,239	(1,961)	22,278
Domestic and international policies	0	0	0	0	0	0	0	0
Spectrum management	8,051	8,370	9,326	11,764	13,284	10,036	(169)	9,867
Telecommunication sciences research	12,981	13,451	14,086	15,996	21,505	14,203	(1,792)	12,412
Total funding	21,032	21,821	23,412	27,760	34,790	24,239	(1,961)	22,278
FTE	113	110	111	108	126	126	(5)	121

Grand total --

	FY 2008 Actual	FY 2009 Actual	FY 2010 Actual	FY 2011 Actual	FY 2012 Enacted	FY 2013 Base	Increase/ Decrease	FY 2013 Request
Salaries & expenses	$48,614	$50,631	$55,467	$89,370	$105,592	$84,867	($610)	84,257
Domestic and international policies	3,983	4,281	4,770	5,491	6,179	5,418	$931	6,349
Spectrum management	30,967	32,191	35,870	45,245	51,094	38,600	($651)	37,949
Telecommunication sciences research	13,664	14,159	14,827	16,838	22,637	14,951	($1,886)	13,065
Broadband Programs	0	0	0	21,796	25,682	25,898	$996	26,894
Digital Television Transition and Public Safety Fund	942,432	593,842	54,059	57,955	2,386	0	0	0
Broadband Technology Opportunities Program (ARRA)	0	77,477	4,287,827	0	0	0	0	0
Grants	0	325	4,248,380	0	0	0	0	0
Program management	0	77,152	39,447	0	0	0	0	0
Digital To Analog Converter Box Program (ARRA)	0	418,341	1,258	0	0	0	0	0
Public Telecommunications Facilities, Planning, and Construction	21,020	20,943	22,914	1,210	3,854	0	0	0
Grants	19,067	19,005	21,182	0	0	0	0	0
Program management	1,953	1,938	1,732	1,210	3,854	0	0	0
Information Infrastructure Grants	323	205	101	170	681	0	0	0
Grants	0	0	0	0	0	0	0	0
Program management	323	205	101	170	681	0	0	0
Total funding	1,012,389	1,161,439	4,421,626	148,705	112,513	84,867	($610)	84,257
Direct	37,533	534,814	4,331,796	44,246	52,111	46,027	$898	46,925
Reimbursable	32,424	32,783	35,771	46,504	58,016	38,840	($1,508)	37,332
Mandatory	942,432	593,842	54,059	57,955	2,386	0	$0	0
FTE	262	262	298	285	306	302	(1)	301

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Department of Commerce
National Telecommunications and Information Administration
Salaries and Expenses
SUMMARY OF RESOURCE REQUIREMENTS
(Dollar amounts in thousands)

	Positions	FTE	Budget Authority	Direct Obligations
FY 2012 Enacted	147	147	45,568	47,576
less: Obligations from prior years			0	(2,008)
plus: 2013 adjustments to base	0	0	459	459
2013 Base	147	147	46,027	46,027
Administrative Savings (all savings reinvested)	[0]	[0]	[144]	
plus: 2013 program changes	3	(1)	898	898
2013 Estimate	150	146	46,925	46,925

Comparison by activity/subactivity		2011 Actual *		2012 Enacted		2013 Base		2013 Estimate		2013 Increase/ (Decrease)	
		Personnel	Amount	Personnel	Amount	Personnel	Amount	Personnel	Amount	Personnel	Amount
Domestic and international policies	Pos/BA	26	$5,365	26	$5,365	26	$5,418	33	$6,349	7	931
	FTE/Obl.	23	5,491	26	6,179	26	5,418	31	6,349	5	931
Spectrum management	Pos/BA	32	8,144	32	7,486	32	7,560	32	7,183	0	(377)
	FTE/Obl.	25	8,339	32	8,644	32	7,560	32	7,183	0	(377)
Wireless Broadband Access (500 MHz)	Pos/BA	0	0	0	0	0	0	7	1,234	7	1,234
	FTE/Obl.	0	0	0	0	0	0	5	1,234	5	1,234
Telecommunication sciences research	Pos/BA	49	7,225	49	7,071	49	7,151	42	5,265	(7)	(1,886)
	FTE/Obl.	44	7,240	49	7,071	49	7,151	42	5,265	(7)	(1,886)
Broadband Programs	Pos/BA	50	19,834	40	25,646	40	25,898	36	26,894	(4)	996
	FTE/Obl.	45	21,796	40	25,682	40	25,898	36	26,894	(4)	996
TOTALS	Pos/BA	157	40,568 *	147	45,568	147	46,027	150	46,925	3	898
	FTE/Obl.	137	42,866	147	47,576	147	46,027	146	46,925	(1)	898
Adjustments to Obligations:											
Recoveries/Refunds			(53)		0		0		0		0
Unobligated Balance, start of year			(2,264)		(2,008)		0		0		0
Unobligated Balance, end of year			2,008		0		0		0		0
Unobligated Balance expiring			10		0		0		0		0
Financing from transfers:											
Transfer from DOC Census (-)			(1,999)		0		0		0		0
Transfer to other accounts (+)			0		0		0		0		0
Wireless Broadband Access (500 MHz)											
Appropriation			40,568		45,568		46,027		46,925		898

* Amounts are different from the Budget Appendix. $4.8 million in unobligated balances of reimbursable funds were rescinded and returned to Treasury from the offsetting collections of the Salaries and Expenses account.

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Exhibit 6

Department of Commerce
National Telecommunications and Information Administration
Salaries and Expenses
SUMMARY OF REIMBURSABLE OBLIGATIONS
(Dollar amounts in thousands)

Comparison by activity		2011 Actual		2012 Enacted		2013 Base		2013 Estimate		2013 Increase/ (Decrease)	
		Personnel	Amount	Personnel	Amount	Personnel	Amount	Personnel	Amount	Personnel	Amount
Reimbursable projects											
Telecommunication Sciences Research……	Pos/BA	45	$0	45	$0	45	$0	45	$0	0	$0
	FTE/Obl.	35	9,598	45	15,566	45	7,800	45	7,800	0	0
Other.....	Pos/BA	1	0	0	0	0	0	0	0	0	$0
	FTE/Obl.	1	548	1	800	1	800	1	800	0	0
Total, Reimbursable projects.....	FTE/Obl.	46	0	45	0	45	0	45	0	0	0
	Pos/BA	36	10,146	46	16,366	46	8,600	46	8,600	0	0
Spectrum Fees											
Spectrum Management……	Pos/BA	109	0	109	0	109	0	109	0	0	0
	FTE/Obl.	102	36,358	109	41,650	109	30,240	109	28,732	0	(1,508)
Total, Spectrum fees.....	Pos/BA	109	0	109	0	109	0	109	0	0	0
	FTE/Obl.	102	36,358	109	41,650	109	30,240	109	28,732	0	(1,508)
Total, Reimbursable Obligations……	Pos/BA	155	0	154	0	154	0	154	0	0	0
	FTE/Obl.	138	46,504	155	58,016	155	38,840	155	37,332	0	(1,508)

Exhibit 7

Department of Commerce
National Telecommunications and Information Administration
Salaries and Expenses
SUMMARY OF FINANCING
(Dollar amounts in thousands)

Comparison by activity	2011 Actual *	2012 Enacted	2013 Base	2013 Estimate	2013 Increase/ (Decrease)
Total Obligations	**$89,370**	**$105,592**	**$84,867**	**$84,257**	**($610)**
Offsetting collections from:					
Federal funds	(46,004)	(57,516)	(38,340)	(36,832)	1,508
Non-Federal sources	(500)	(500)	(500)	(500)	0
Recoveries/Refunds	(53)	0	0	0	0
Unobligated balance, start of year	(2,264)	(2,008)	0	0	0
Unobligated balance, end of year	2,008	0	0	0	0
Unobligated Balance expiring	10				
Budget Authority	**42,567**	**45,568**	**46,027**	**46,925**	**898**
Restoration of unobligated balance, rescission	0	0	0	0	0
Financing:					
Transferred from other accounts (-)	(1,999)	0	0	0	0
Transferred to other accounts (+)	0	0	0	0	0
Appropriation	**40,568**	**45,568**	**46,027**	**46,925**	**898**

* Amounts are different from the Budget Appendix. $4.8 million in unobligated balances of reimbursable funds were rescinded and returned to Treasury from the offsetting collections of the Salaries and Expenses account.

Department of Commerce
National Telecommunications and Information Administration
Salaries and Expenses
JUSTIFICATION OF ADJUSTMENTS TO BASE

Adjustments to Base		FTE	Amount ($000)
COST CHANGES:			
Pay Raises		0	$ 74
FY 2013 pay increase and related costs			
A general pay raise of 0.5 percent is assumed to be effective January 1, 2013.			
Total cost of FY 2013 pay raise	74,000		
Civil Service Retirement System (CSRS)		0	(8)
The number of employees covered by CSRS continues to drop as positions become vacant and are filled by employees who are covered by the Federal Employees' Retirement System (FERS). The estimated percentage of payroll for employees covered by CSRS will drop from 6.8 percent in FY 2012 to 6.1 percent in FY 2013. The contribution rate will remain 7.0 percent.			
FY 2013 ($16,688,000 x .061 x .0700)	71,258		
FY 2012 ($16,688,000 x .068 x .0700)	79,435		
Total adjustment to base	(8,177)		
Federal Employees Retirement System (FERS)		0	14
The number of employees covered by FERS continues to rise as employees covered by CSRS leave and are replaced by employees covered by FERS. The estimated percentage of payroll for employees covered by FERS will rise from 93.2 percent in FY 2012 to 93.9 percent FY 2013. The contribution rate will remain 11.7 percent.			
FY 2013 ($16,688,000 x .939 x .117)	1,833,394		
FY 2012 ($16,688,000 x .932 x .117)	1,819,726		
Total adjustment to base	13,668		

Department of Commerce
National Telecommunications and Information Administration
Salaries and Expenses
JUSTIFICATION OF ADJUSTMENTS TO BASE

Adjustments to Base	FTE	Amount ($000)
Federal Insurance Contribution Act (FICA)	0	$ 30
As the percentage of payroll covered by FERS rises, the cost of OASDI contributions will increase. In addition, the maximum salary subject to OASDI tax will rise from $110,100 in FY 2012 to $113,100 in FY 2013. The OASDI tax rate will remain 6.2 percent.		
Regular Employees		
FY 2013 ($16,688,000 x .939 x .884 x .062) 858,843		
FY 2012 ($16,688,000 x .932 x .860 x .062) 829,297		
Total adjustment to base 29,546		
Thrift Savings Plan (TSP)	0	2
The cost of NTIA's contributions to the Thrift Savings Plan will also rise as FERS participation increases. The contribution rate is expected to remain 2 percent.		
FY 2013 ($16,688,000 x .939 x .02) 313,401		
FY 2012 ($16,688,000 x .932 x .02) 311,064		
Total adjustment to base 2,337		
Health Insurance	0	94
Effective January 2011, NTIA's contribution to Federal employees' health insurance premiums increased by 10.2 percent. Applied against the 2012 estimate of $921,000, the additional amount required is $93,942.		
Employee Compensation Fund:	0	(9)
The Employees Compensation Fund bill for the year ending June 30, 2011, is $9,000 lower than the bill for the year ending June 30, 2010. The Employee Compensation fund is based on an actual billing from the Department of Labor.		
Mileage Rate Increase	0	1
Effective January 2011, the General Services Administration increased the mileage rate from 50 cents to 51 cents per mile, a 2.0% increase. This percentage was applied to the 2012 estimate of $44,000 to arrive at an increase of $880.		

Exhibit 9

Department of Commerce
National Telecommunications and Information Administration
Salaries and Expenses
JUSTIFICATION OF ADJUSTMENTS TO BASE

Adjustments to Base	FTE	Amount ($000)
Per Diem Per diem rates are projected to increase 6.0 percent effective October 2012. This percentage was applied to the FY 2012 estimate of $325,000 to arrive at an increase of $19,500.	0	$ 20
Electricity The average decrease for PEPCO electricity is projected to be 25 percent. This percentage was applied to the 2012 electricity estimate of $676,000 for a decrease of $169,000.	0	(169)
Water The average increase for DCWASA is projected to be 5 percent. This percentage was applied to the 2012 DCWASA estimate of $36,000 for an increase of $1,800.	0	2
Rental Payments to GSA GSA rates are projected to increase 1.7 percent in FY 2013. This percentage was applied to the FY 2012 estimate of $1,901,000 to arrive at an increase of $32,317.	0	32
Working Capital Fund An additional amount of $58,000 is required to fund the cost increases in the Department's Working Capital Fund.	0	58
General Pricing Level Adjustment This request applies 1.5 percent based on OMB economic assumptions for FY 2013 to object classes where the prices that the Government pays are established through the market system. Factors are applied to: other services ($308,685), supplies and materials ($2,325), equipment ($4,305), transportation of things ($600), GPO Printing ($1,305), and communications, utilities, and misc. charges ($1,305).	0	318
Subtotal, Cost Changes	0	459
Total, Adjustments to Base	0	$ 459

APPROPRIATION ACCOUNT: SALARIES AND EXPENSES

BUDGET ACTIVITY: SALARIES AND EXPENSES

For FY 2013, NTIA requests an increase of $898,000 and a net decrease of 1 FTE from the FY 2013 base for a total of $46,925,000 and 146 FTE for Salaries and Expenses. This net increase includes $459,000 in inflationary adjustments.

BASE JUSTIFICATION FOR FY 2013:

Salaries and Expenses Overview

NTIA serves as the principal adviser to the President on telecommunications and information policy issues. In this role, NTIA formulates, advocates, and participates in the implementation of policies that further domestic and foreign policy goals and enhance the international competitiveness of U.S. telecommunications and information technology, equipment, and services companies. These policies further the United States' strategic goals of opening markets and encouraging competition, innovation, and entrepreneurship, in the United States and globally; advancing the public interest in telecommunications, mass media, and information services; and promoting the availability of advanced services to all people around the globe.

Since its creation in 1978, NTIA has been at the cutting edge of critical telecommunication issues. For example, NTIA identified Federal radio spectrum that the Federal Communications Commission (FCC) auctioned to commercial wireless markets, collecting over $19 billion, with the net proceeds deposited in the U.S. Treasury. NTIA also administered the TV Converter Box Coupon Program so that analog televisions could function after the June 2009 transition of full-power television stations to digital broadcasting. In 2009 and 2010, NTIA awarded grants to develop and expand broadband services to areas not adequately served, to improve access to broadband by public-safety agencies, and to upgrade technology and capacity at public computing centers, including community colleges and public libraries. During some national and international emergencies, such as Hurricane Katrina and the 2010 earthquake in Haiti, NTIA responders have assisted in maintaining or restoring radio spectrum frequency assignments to ensure continued telecommunications. Additionally, NTIA is the primary U.S. government expert on the Internet's domain name system (DNS) – the critical underlying infrastructure upon which the Internet depends.

NTIA policy objectives are based on the identification and interdisciplinary analysis of economic, technological, regulatory, legal, social, and foreign policy issues. These activities fall within three Department of Commerce (DOC) Strategic Goals:

Economic Growth -- Innovation and Entrepreneurship: Develop the tools, systems, policies, and technologies critical to transforming our economy, fostering U.S. competiveness and driving the development of new businesses: Objective 4. Drive innovation by supporting an open global Internet and through communications and broadband policies that enable robust infrastructure, ensure integrity of the system, and support e-commerce.

***Economic Growth* -- Trade Promotion and Compliance:** Improve our global competitiveness and foster domestic job growth while protecting American security: Objective 11. Develop and influence international standards and policies to support the full and fair competitiveness of the U.S. information and communications technology sector.

Science and Information: Generate and communicate new, cutting-edge scientific understanding of technical, economic, social, and environmental systems: Objective 13. Increase scientific knowledge and provide information to stakeholders to support economic growth and to improve innovation, technology, and public safety.

NTIA's budget proposals support the Department of Commerce's Strategic goals and objectives identified in the Department's and NTIA's Balanced Scorecard. The Institute for Telecommunication Sciences laboratory specifically supports the theme of Science and Information and the Department's goal of "Generating and communicating new, cutting-edge scientific understanding of technical, economic, social, and environmental systems." The Department of Commerce's Strategic Plan describes NTIA's activities that include working with the White House and other Federal agencies on Administration-wide telecommunications and information policy statements and on obtaining private-sector views on a broad range of telecommunications and information policy issues.

NTIA's Salaries and Expenses budget is organized into four subactivities:

- The Domestic and International Policies subactivity formulates and promotes national policies for consideration by the President, Congress, other Executive Branch agencies, by the independent Federal Communications Commission (FCC), Federal Trade Commission (FTC), and by other government and non-government organizations. The subactivity also formulates and promotes national policies for presentation in multilateral, bilateral, and international organizational settings as well as ensuring the stability and security of the Internet DNS.
- The Spectrum Management subactivity develops, establishes, and implements plans, policies, activities, capabilities and procedures to ensure that the U.S. spectrum policy, spectrum allocations and spectrum management capabilities and processes keep pace with the needs of Federal agencies and the American public for access to the radio spectrum in the 21st century domestically and internationally.
- The Telecommunication Sciences Research subactivity utilizes telecommunications research and engineering to support Administration telecommunications goals, such as enhanced domestic competition, advanced services and new technology deployment, improved foreign trade opportunities for U.S. telecommunication firms, and more efficient use of the radio frequency spectrum.
- The Broadband Programs subactivity serves and monitors recipients of grants from the Broadband Technology Opportunities Program, which originated from the receipt of $4.7 billion through the American Recovery and Reinvestment Act of 2009 (Recovery Act, Public Law No. 111-5). The grants were awarded for broadband initiatives throughout the United States, to improve broadband services in areas of the Nation not adequately served, and to developing a map of broadband services in the United States. Among other things, NTIA must ensure that broadband projects are used by recipients in an efficient, expeditious, and competent manner. Funds for Broadband Programs are now presented as a separate line item in the Salaries and Expenses appropriation.

The majority of NTIA staff and facilities are located in Washington, DC. Boulder, CO, is the site for the NTIA research and engineering laboratory and related offices.

In carrying out its diverse programs and services, NTIA uses a multi-stakeholder approach to lead U.S. policymakers and regulators, governments around the world (including divisions of the United Nations), and industry in addressing telecommunication issues. NTIA also appears before the FCC, which is a regulatory agency, to present the Administration's views on telecommunication and information matters.

The Institute for Telecommunications Sciences (ITS) in Boulder, CO, is NTIA's research and engineering laboratory. ITS provides technical support to NTIA in advancing telecommunications infrastructure development, improving U.S. telecommunications trade opportunities, and promoting more efficient and effective use of the radio spectrum. On a reimbursable basis, NTIA's laboratory also serves as a principal Federal resource for addressing the telecommunications, information technology (IT), and security challenges of other Federal agencies, state, local, and tribal governments

Significant Adjustments-to-Base (ATBs):

NTIA requests a net increase of 0 FTE and $459,000 to fund adjustments to current programs for Salaries and Expenses activities. The increase includes funds for an FY 2013 pay raise as well as inflationary increases for non-labor activities, including service contracts, health insurance, per diem, and rent charges from the General Service Administration (GSA).

Exhibit 10

Department of Commerce
National Telecommunications and Information Administration
Salaries and Expenses
PROGRAM AND PERFORMANCE: DIRECT OBLIGATIONS
(Dollar amounts in thousands)

Activity: Salaries and expenses
Subactivity: Domestic and international policies

Comparison by line item		2011 Actual		2012 Enacted		2013 Base		2013 Estimate		2013 Increase/ (Decrease)	
		Personnel	Amount	Personnel	Amount	Personnel	Amount	Personnel	Amount	Personnel	Amount
Domestic and international policies.....	Pos/BA	26	$5,365	26	$5,365	26	$5,418	33	$6,349	7	$931
	FTE/Obl.	23	5,491	26	6,179	26	5,418	31	6,349	5	931
Direct Obligations.....	Pos/BA	26	5,365	26	5,365	26	5,418	33	6,349	7	931
	FTE/Obl.	23	5,491	26	6,179	26	5,418	31	6,349	5	931

SUBACTIVITY: DOMESTIC AND INTERNATIONAL POLICIES

The objectives of the Domestic and International Policies subactivity are to:

Domestic Policies

- Promote the deployment and adoption of broadband services;
- Encourage greater innovation in and use of the Internet, by protecting, among other things, users' privacy and security, children who go online, intellectual property, and the global free flow of information.
- Encourage the development of new telecommunications and information technologies and services for the American public;
- Preserve and promote an open Internet, consistent with service providers' need to manage their networks in a transparent and nondiscriminatory manner;
- Open telecommunications and information markets to greater competition;
- Refrain from regulating telecommunications and information markets wherever market forces are sufficient to ensure reasonable prices and terms of services and to protect consumers;
- Promote economic growth; and
- Promote small-business and minority interests in the Internet economy.

International Policies

- Advocate and negotiate international norms that preserve and promote a single global interoperable Internet;
- Facilitate and build multi-stakeholder models for addressing Internet governance issues (e.g., privacy, cybersecurity, and free flow of information);
- Continue support for private-sector management of and ensure the stability and security of the Internet's domain name system (DNS);
- Coordinate new international telecommunications and information policies and technologies with domestic policies (such as, the introduction of internationalized domain names (IDN), identity management (IdM), the deployment of Internet Protocol Version 6 (IPv6), Radio Frequency Identification (RFID), etc.);
- Encourage greater innovation and use of the Internet, by protecting, among other things, users' privacy and security, children who go online, intellectual property, and the global free flow of information;
- Negotiate open, competitive markets abroad for telecommunications and information services, including IP-enabled services; and

- Work multilaterally and bilaterally to ensure policy and regulatory approaches pertaining to communications and information services are fair, open, transparent, not-overly burdensome, and in line with U.S. domestic policies.

These activities are conducted under the authority arising from NTIA's statutory responsibilities as lead telecommunications and information expert agency. (NTIA Organization Act of 1992, Pub. L. No. 102-538, 106 Stat. codified at 47 U.S.C. Section 901 *et seq.)* The Act identifies a number of functions and requires the Secretary of Commerce to assign these functions to the Assistant Secretary for Communications and Information and to NTIA.

The Act gives NTIA the "authority to coordinate the telecommunications activities of the executive branch" and to "assist in the formulation of policies and standards for those activities, including (but not limited to) considerations of interoperability, privacy, security, spectrum use, and emergency readiness." (§103(b)(2)(H); 47 U.S.C. § 902(b)(2)(H)).

The act also specifically grants NTIA the "authority to serve as the President's principal adviser on telecommunications policies pertaining to the Nation's economic and technological advancement and to the regulation of the telecommunications industry" § 103(b)(2)(D), 47 U.S.C. § 902(b)(2)(D); "the authority to develop and set forth" such policies, § 103(b)(2)(I), 47 U.S.C. § 902(b)(2)(I); and the "responsibility to ensure that the views of the executive branch on telecommunications matters are effectively presented to the [Federal Communications] Commission and, in coordination with the Director of the Office of Management and Budget, to the Congress." § 103(b)(2)(J), 47 U.S.C. § 902(b)(2)(J). NTIA also serves as the manager of the Federal government's use of the electromagnetic spectrum.

Internationally, the Act assigns NTIA functions that involve working with the Secretary of State on developing and setting forth plans, policies and programs that relate to international telecommunications issues; coordinating preparations for international conferences, and providing advice and assistance on international telecommunications issues, § 103(b)(2)(G), 47 U.S.C. § 902(b)(2)(G). The Telecommunications Trade Act of 1988 sets forth policy goals for international telecommunications trade. NTIA assists in implementation of the Act through policy coordination with the International Trade Administration (ITA), the U.S. Trade Representative (USTR), and other U.S. agencies by preparing for and participating in telecommunications consultations with selected countries, with such organizations as the World Trade Organization (WTO), and through bilateral and regional Free Trade Agreements (FTAs) where telecommunications and information regulatory policies are involved.

NTIA also leads the Department of Commerce's Internet Policy Task Force (IPTF). The Task Force leverages expertise across many bureaus, including those responsible for domestic and international information and communications technology policy, international trade, cyber security standards and best practices, intellectual property, business advocacy and export control.

The Domestic and International Policies subactivity contains two items: Domestic Policies and International Policies.

DOMESTIC POLICIES (http://www.ntia.doc.gov/opadhome/opadhome.html)
NTIA is the principal Executive Branch agency dedicated to advising the President on telecommunications and information policy making. NTIA formulates and promotes national policies for consideration by the President, Congress, other Executive Branch agencies, the independent

Federal Communications Commission (FCC) and Federal Trade Commission (FTC), and other government and non-government organizations. Thus, NTIA staff must possess expertise, skill, and understanding in legal, economic, and technical issues; in telecommunications and information technology innovations; products, and services; in telecommunications and information technology policy; in regulatory structures and processes; and in the Internet economy.

Domestically, NTIA communicates policy positions in many ways. NTIA works with the White House to develop policy positions and draft executive memoranda; participates in White House or interagency policy committees (e.g., the cabinet-level National Science and Technology Council (NSTC), Interagency Policy Committees (IPCs); files comments with independent agencies such as the FCC or FTC; works with Congress on the formulation of legislation and provides comments through OMB; addresses issues through briefings to senior officials or interagency meetings; and communicates with the public through reports, speeches, or public events.

The U.S. has the world's leading telecommunications and information markets, and leads the world in the number of broadband connections. This translates to increased jobs for Americans, economic growth, innumerable socio-economic benefits to the public, improved supply of governmental services, and strong public-safety, national, and homeland security capabilities. Much of the U.S. success in these sectors is based on market-driven, pro-competitive policies and prudent deregulation--measures that have been emulated throughout the world. In radio spectrum management in particular, market based spectrum management reforms, advocated by NTIA and adopted by the FCC, have led to more efficient and innovative use of spectrum for commercial services.

The Communications Act of 1934, as amended, provides a basis for policymaking with respect to many telecommunications and information services and products. Other U.S. and state laws also affect the telecommunications and information sectors. Existing laws, regulations, and administrative procedures are subject to enormous pressures created by rapid changes in technology and increased demand for advanced services and equipment. NTIA's responsibilities are set forth by statute (47 U.S.C. §901 et seq.). NTIA's domestic policy activities require it to identify important current telecommunications and information policy issues, to evaluate and articulate those policies, and to respond to specific requests.

NTIA's policy activities support the Department's strategic themes of providing the information and the framework to enable the economy to operate efficiently and equitably, on a global scale; providing infrastructure for innovation and entrepreneurship to enhance American competitiveness; and strengthening management at all levels. NTIA's domestic policy activities require it to maintain expertise with respect to current telecommunications and information policy issues and to identify the most important for Executive Branch attention. NTIA performs research and analysis, and prepares written recommendations for future courses of action that affect these sectors. In coordination with other parts of the Administration, NTIA makes recommendations and works with the Congress on new or revised laws affecting these sectors; it also files written comments to the FCC on specific regulatory proposals.

NTIA engages in public discussions and meetings with government (Federal, state, and foreign) officials and private sector representatives to formulate and advocate its policies. NTIA obtains information and advice both informally, on an ad hoc basis, and through the Commerce Spectrum Management Advisory Committee. Consistent with the Federal Advisory Committee Act, this committee provides advice to the Assistant Secretary of Commerce for Communications and Information on needed reforms to domestic spectrum policies and management to enable the introduction of new spectrum-dependent technologies and services, such as policy reforms for

expediting the American public's access to broadband services, public safety, and long-range spectrum planning. In addition, NTIA facilitates business ownership and participation, particularly small business and minority participation, in these important sectors.

NTIA will remain at the forefront of other new Internet technologies and the policy changes they will require, such as next generation broadband services. NTIA will continue to develop and advocate policies that affect the Internet, wireless and wireline telecommunications competition, terrestrial and satellite video services, unlicensed devices, and future products and services important to the United States and its economy. It will also continue to promote minority ownership opportunities in telecommunications; provide staff support and expertise to White House offices and the Department of Commerce; respond to requests for technical and policy advice from the Congress, other Federal Government officials and from the private sector; and to provide staff support to the Commerce Spectrum Management Advisory Committee.

INTERNATIONAL POLICIES (http://www.ntia.doc.gov/oiahome/oiahome.html

NTIA formulates and advocates national policies for presentation in multilateral and bilateral organizational settings. The objective of these policies is to enhance competition in pursuit of both improved market access for U.S. service and equipment providers, and to achieve foreign policy goals such as economic development, democratization, and promotion of U.S. national security telecommunications and information interests in geographically strategic areas.

Internationally, NTIA communicates policy positions in many ways. NTIA works with the White House to develop policy positions and draft executive memoranda; participates in White House or interagency policy committees (e.g., the cabinet-level National Science and Technology Council (NSTC), Interagency Policy Committees (IPCs); files comments with independent agencies such as the FCC or FTC; works with Congress on the formulation of legislation and provides comments through OMB; addresses issues through briefings to senior officials or interagency meetings; and communicates with the public through reports, speeches, public events, and participation in international organizations.

Consequently, NTIA must possesses expertise in the following areas: an understanding of domestic and international telecommunications and information policies and the resultant policy and regulatory structures and processes; an appreciation of U.S. economic, foreign, and trade policies and objectives, in particular as they relate to foreign telecommunications and information regulatory policies; knowledge of U.S.-backed foreign assistance resources that can supplement our educational efforts; in-depth expertise regarding U.S. and foreign-developed telecommunications and information products and services; and a detailed understanding of relevant international and intergovernmental organizations and treaties.

If U.S.-invested companies are to continue to innovate and maintain their global leadership in these sectors, policy and regulatory environments at home and abroad need to encourage the development of and access to telecommunications and information technologies and networks. To meet this need, NTIA advocates for flexible, technology-neutral, and transparent policy and regulatory regimes. This approach supports universal access to telecommunications and information technologies and networks that stimulates democratization, economic development, and entrepreneurship. It also facilitates the use of these technologies in disaster relief efforts and meeting broader U.S. national security, telecommunications, and information interests in war-torn areas. NTIA is uniquely positioned to serve as, or advise, U.S. negotiators by participating as delegates or in leadership posts in a variety of fora on international, regional, and bilateral policies and regulations, mainly of an intergovernmental nature. Delegations draw upon NTIA's wide-ranging expertise in telecommunications and information policy issues, particularly those related to Internet policies, to

support these goals of innovation, market entry, and universal telecommunications and information access. For example, NTIA advocates adoption abroad of open and transparent processes that take into account the input of all relevant stakeholders and that avoid overly prescriptive or burdensome regulation.

NTIA implements its policy objectives through a variety of representational and management responsibilities in inter-governmental fora such as the International Telecommunication Union (ITU), which is a United Nations organization, the Inter-American Telecommunication Commission (CITEL), the Asia-Pacific Economic Cooperation forum (APEC), the Organization for Cooperation and Economic Development (OECD), the International Telecommunications Satellite Organization (ITSO), the International Mobile Satellite Organization (IMSO), as well as in bilateral discussions (e.g., China, India, and Japan). NTIA also works with other Federal agencies to prepare for and participate in other related international telecommunications and information activities, such as trade negotiations involving the telecommunications and information sector. For example, NTIA staff possesses the most extensive technical knowledge and policy expertise in the U.S. Government regarding management of a critical Internet infrastructure asset: the Internet's DNS. As such, NTIA staff administers the Department's Internet Assigned Numbers Authority (IANA) functions contract through which all changes to the Internet's authoritative root zone file – or "address book" are approved.

NTIA also oversees the administration of the Department's Affirmation of Commitments with the Internet Corporation for Assigned Names and Numbers (ICANN) and represents the U.S. Government in the ICANN's Governmental Advisory Committee, which advises ICANN on public policy issues related to the Internet DNS. ICANN also performs, as of January 2012, the IANA functions under contract to the Department of Commerce. The IANA functions consist of several interdependent Internet management responsibilities, including coordination of the assignment of technical protocol parameters; performance of administrative functions associated with root zone management; and the allocation of Internet numbering resources.

NTIA also administers the Department's contract for the management of the DOT-US (".us") Internet top-level domain. NTIA also serves as the Federal Program Officer for the Department's Cooperative Agreement with EDUCAUSE to manage the DOT-EDU (".edu") domain space for use by educational institutions. This cooperative agreement facilitates the policy development and technical operations of the .edu domain and provides a framework for the administration of the .edu domain. NTIA also coordinates with the Department of Homeland Security, the National Security Council, and others to safeguard the security and stability of the Internet DNS.

The NTIA Organization Act as amended (47 U.S.C. §902(b)) requires the Secretary of Commerce to assign the Assistant Secretary for Communication and Information and NTIA various responsibilities and functions regarding international telecommunications and information policy. These responsibilities and functions include the development of plans, policies, and programs relating to international telecommunications and information issues for use in conferences, negotiations, and other fora. The Secretary is also responsible for coordinating economic, technical, operational, and related preparations for U.S. participation in Information and Communications Technology (ICT) organizations and negotiations. The Act requires NTIA to formulate telecommunications and information policy for participation and activities in international organizations such as the U.S. ITU, CITEL, APEC, OECD, ITSO, IMSO, and others. A July 1997 Presidential directive requires the Department of Commerce to transition the management of the Internet DNS to the private sector. ICANN signed an Affirmation of Commitments with the Department of Commerce in September 2009, which completed the transition of the technical management of the DNS to a private-sector-led, multi-stakeholder model and ensures accountability and transparency in ICANN's decision-making

with the goal of protecting the interests of global Internet users. ICANN facilitates DNS policy development through a bottom-up process involving the diverse interests of generic and country code top level domain registries, domain name registrars, the regional Internet registries, the technical community, business and individual Internet users, and governments. NTIA will continue its efforts in the stewardship of the DNS including the management of certain contracts for the technical management of the .us and .edu top-level domains as well as IANA functions.

In FY 2013, NTIA will continue its wide-ranging activities to enhance the global strength of U.S. telecommunications and information interests, including advocating and negotiating international norms that preserve and promote a single global interoperable Internet as well as facilitating multi-stakeholder solutions for addressing Internet governance issues (e.g., privacy, cybersecurity, and free flow of information).

NTIA will work to preserve key U.S. foreign policy goals in the telecommunications and information sector, in particular on the policy approaches to Internet governance to counter the many opponents to the U.S. approach. We will continue to promote market driven approaches to telecommunications and information pricing issues, such as international settlement rates and proposals for Internet cost-sharing arrangements. We will work collaboratively with other countries and institutions to ensure the benefits of new technologies that bring increased connectivity, such as electronic numbering and unlicensed usage of advanced wireless technologies. We will continue to support and participate in multi-stakeholder models of Internet governance and to advance public and private sector policies that promote the security and stability of the Internet and the DNS.

NTIA will encourage bilateral, regional, and multilateral adoption of policies that encourage open and competitive foreign markets, with transparent decision-making, while stimulating democratization, economic development, and promotion of U.S. national security telecommunications and information interests overseas. We will advance these objectives by advocating, monitoring, and participating in the structural reform of international institutions such as the ICANN, IGF, ITU, CITEL, OECD, APEC, IMSO, and ITSO.

NTIA will continue to work with other agencies to develop implementation strategies for improved and continuous telecommunications and information development in key countries and regions (e.g., Africa, Central and Latin America, and the Middle East), through such foreign assistance efforts as the Telecommunications Leadership Program, and the U.S. Telecommunications Training Institute.

NTIA will assist other parts of the Administration in development of specific trade negotiation language, for instance, in the continuation of the Doha Round of Services negotiations at the World Trade Organization, and the annual telecommunications trade act reviews under Section 1377 of the Telecommunications Trade Act of 1988. We will assist the International Trade Administration (ITA), Treasury, State, Justice, and the FCC to review potential acquisitions of strategic, critical U.S. telecommunications assets under FCC regulations and the Exon-Florio review mechanism for Foreign Direct Investment (FDI) in the Committee on Foreign Investment in the United States (CFIUS) process). NTIA will work through bilateral, regional, and international fora such as the ITU, OECD, APEC, and CITEL to promote the rollout and uptake of broadband infrastructure, services, and equipment. We will work with the Office of the United States Trade Representative (USTR), other Commerce agencies (ITA, National Institute of Standards and Technology (NIST), Foreign Commercial Service (FCS)), and the State Department on policy approaches to telecommunications and information standards developments worldwide, especially in key emerging markets such as India and China and our North American partners (Canada and Mexico). These standards are emerging in influential new technologies in developing economies, such as next generation

networking (NGNs), Advanced Wireless systems such as third and fourth Generation Wireless (3G/4G), Radio-Frequency Identification (RFID), and Worldwide Interoperability for Microwave Access (WiMAX). NTIA will also provide policy and technical guidance to the State Department in the IMSO and ITSO oversight processes, to ensure fair and competitive provisioning of fixed and mobile satellite services on a global basis, to protect lifeline telecommunications connectivity for developing nations, to protect Safety of Life at Sea (under the SOLAS treaty), and to implement provisions of the U.S. Maritime Transport Security Act of 2002 to ensure long-range tracking of vessels on the high seas.

PROGRAM CHANGE FOR FY 2013:

Internet 3.0—Internet Innovation (Base Funding: $5,418,000 and 26 FTE; Program Change: $931,000 and 5 FTE): NTIA requests an increase of $931,000 and 5 FTE for a total of $6,349,000,000 and 31 FTE to bolster the Department of Commerce's leadership role in the evolution of innovation-promoting policies for the Internet both domestically and internationally. NTIA will develop, implement, and advocate an "Internet 3.0" policy framework, building on previous work, including the Department's successful engagement with the Internet Corporation for Assigned Names and Numbers.

While a number of individual government agencies have interests in Internet policy, it is important that there be a single point within the Administration to consider and harmonize national policy. As noted above, NTIA is directed by law to provide for the "coordination of the telecommunications activities of the executive branch, including (but not limited to) considerations of interoperability, privacy, security, spectrum use and emergency readiness. (47 U.S.C. Sec. 902(b)(2)(H)) While the legislation creating NTIA predates the rise of the Internet, the statute further directs NTIA "to conduct studies and make recommendations concerning the impact of the convergence of computer and communications technology," in other words, the Internet. (47 U.S.C. 902 Sec. 902(b)(2)(M))

This Internet Innovation Initiative includes the following components:

1) Privacy: ($398,390 and 2 FTE) Consumer privacy is a fundamental issue in the development of a sustainable Internet Policy 3.0 framework. (The term "Internet 3.0" refers to the next generation of Internet use, with 1.0 being primarily informational websites and 2.0 being increased user-generated content and developments such as social media. The third phase of the development of the Internet brings with it a range of new public policy challenges that the U.S. must be prepared to meet.) For consumers, it can mean protection against identify theft or the use of private data by social media or other increasingly popular web sites. For businesses, the ability to make flexible and innovative use of personal information, in an environment of consumer trust, is vital to future development of the marketplace. There is widespread agreement that the current privacy frameworks are in need of updating, both domestically and globally. Working with the Internet Policy Task Force (IPTF) NTIA has laid our general policy principles to guide this effort, but refining and implementing consensus principles will require sustained engagement with a multi-stakeholder group. In the mid-1990s, NTIA played a leading role, along with the Federal Trade Commission (FTC), in exploring options for addressing new online privacy issues. This initiative would provide funding to take on these issues in the current Internet environment and would implement the policy recommendations of the IPTF. Using new public policy and technology expertise, NTIA would establish a Privacy Policy Office to oversee the privacy efforts. This office would develop best practice agreements with industry, develop global privacy guidelines (working through the international Organization for Economic Cooperation and Development (OECD) or other organizations), and update its privacy report annually. This initiative would also support new issues to be taken up by the IPTF, such as lawful surveillance and the role of Internet Service Providers (ISPs).

In addition, this initiative would provide funds for NTIA to consider and respond to recommended Internet policies in the National Broadband Plan (NBP) prepared by a task force of the Federal Communications Commission (FCC). That plan recommends a number of actions for itself and executive branch agencies. As the President's principal adviser on telecommunications and information policy issues, NTIA has the jurisdiction and responsibility to review these proposals and coordinate their implementation within the government as appropriate. Many of the Commission's proposals give NTIA an opportunity to offer Internet policy expertise to other Federal agencies as

they implement Internet-based applications that make intensive use of personal information. The proposals recommend that government agencies (primarily the FCC and Federal Trade Commission (FTC) consider whether and how to clarify the relationship between users and their online profiles (NBP Recommendation 4.14); that there be legislation creating new consumer privacy tools such as trusted "identity providers" to allow consumers to manage their data (NBP Recommendation 4.15); that government agencies (FCC and FTC) develop principles to require informed consent before broadband providers share certain types of information (NBP Recommendation 4.16); that the Federal government (primarily FTC) put more resources into combating identify theft and fraud (NBP Recommendation 4.17); that broader national online security policy should be coordinated with the among Executive branch and independent agencies (NBP Recommendation 4.18); that the Federal Chief Information Officers Council accelerate agency adoption of social media for internal use (on which NTIA can provide expertise) (NBP Recommendations 14.8 and 15.10); and that there be legislation reexamining the Privacy Act to facilitate the delivery of online government services (NBP Recommendation 14.17). NTIA would participate on behalf of the Administration in the FCC and FTC proceedings.

2) Cybersecurity and Other Internet Issues: ($230,010 and 1 FTE)

The Department of Commerce views improving the nation's commercial cybersecurity posture and establishing consumer and business confidence in the security of cyberspace as essential to the country's economic well-being. Cybersecurity and confidence in that security are fundamental to realize the potential of electronic commerce (e-commerce), fuel innovation, create new types of jobs, and accelerate economic growth. Recognizing the vital importance of the Internet to U.S. innovation, prosperity, education, politics and cultural life, the Department of Commerce has made it a top priority to ensure that the Internet remains an open and trustworthy space for innovation through the work of the Internet Policy Task Force (IPTF). A major cybersecurity goal will be to implement policy recommendations of the IPTF.

NTIA must also consider and respond to policies recommended in the NBP within NTIA's policy jurisdiction. These recommendations included that the executive branch, in collaboration with relevant regulatory authorities, develop machine-readable repositories of actionable real-time information concerning cybersecurity threats in a process led by the White House Cybersecurity Coordinator (NBP Recommendation 14.9); the Federal government should take an active role in developing public-private cybersecurity partnerships (NBP Recommendation 14.10); that the executive branch expand existing and develop additional educational programs, scholarship funding, training programs, and career paths to build workforce capability in cybersecurity (NBP Recommendation 14.11); and that the Executive Branch develop a coordinated foreign cybersecurity assistance program to assist foreign countries in the development of legal and technical expertise to address cybersecurity.

NTIA's activities with respect to these recommendations would include advising the Administration on appropriate policies to ensure commercial cybersecurity; working with other agencies to lead the creation of a voluntary cybersecurity certification program; convening interagency working groups on cybersecurity; improving government online security efforts; participating in an interagency initiative to draft a domestic and international strategy to build on "The Cyberspace Review" issued by President Obama in May, 2009 (http://www.whitehouse.gov/the_press_office/Statement-by-the-Press-Secretary-on-Conclusion-of-the-Cyberspace-Review/) and the planned cybersecurity interagency "white paper" planned for FY 2012; and supporting agency protections to allow greater agency adoption of social media tools.

In addition, several international organizations, including the ITU and several countries have expressed growing interest in cybersecurity issues. Some of the proposals, however, raise significant concerns. NTIA will work with the appropriate international bodies to eliminate redundancy and guide international policies to support the interests of the United States.
Another important issue is intellectual property protection. Internet growth and innovation require a balance between protecting against illegal piracy of copyrighted works and intellectual property, while preserving the rights of users to access lawful content. This activity will implement policy recommendations of the ITPF. It will also provide NTIA with the resources to lead interagency efforts to address recommendations in the NBP. Relevant recommendations include that the Department of Education or other departments increase the supply of digital educational content online (NBP Recommendation 11.2); that the Department of Education examine digital data and interoperability standards to ensure consistency with the needs and practices of the educational community (NBP Recommendation 11.3); that Congress review existing copyright law and methods to encourage copyright holders to grant educational digital rights of use (NBP Recommendation 11.4); for public and broadcast media to more easily contribute their archival content to a digital national archive and grant reasonable noncommercial downstream usage rights (NBP Recommendation 15.9).

3) Global Internet Economy: ($302,600 and 2 FTE) If U.S. companies are to continue to innovate and maintain their global leadership in the Information and Communications Technology (ICT) sector, policy/regulatory environments abroad need to foster user confidence in order to facilitate deployment of ICT networks, which will enhance network adoption and usage, ultimately enabling and driving a cycle of continued innovation and economic growth. Challenges associated with achieving a Global Internet Economy include the fundamental need to expand Internet access and use worldwide, as well as the need to secure these critical information infrastructures and respond to new threats in order to ensure a trusted Internet-based environment, which will offer protection to individuals, especially children and other vulnerable groups. In this regard, efforts are needed to ensure the protection of digital identities and personal data, as well as the privacy of individuals online. A key way to meeting these challenges head on is to create a policy/regulatory environment that assures a level playing field for competition and upholds the open, decentralized, and dynamic nature of the Internet, which has been the foundation for its unprecedented growth and impact. This effort will in part look at the important role of online services and other "intermediaries" play in fostering an innovative and positive Internet economy.

To meet the need to build a culture of cybersecurity worldwide, NTIA proposes to promote the development of the Global Internet Economy. NTIA brings to the ITPF its functions as the President's principal adviser on telecommunications and information policy and its expertise as the primary U.S. government expert on the Internet's domain name system (DNS) – the critical underlying infrastructure upon which the Internet is dependent. NTIA is uniquely positioned to facilitate collaboration between the U.S. government, the private sector, civil society, and the Internet technical community to launch a new round of targeted bilateral policy and technical exchanges via ICT policy summits that will support the development of the global Internet economy. These policy summits will be aimed at key regional actors (e.g., China, India, Egypt, Brazil, and Russia) would facilitate exchanges on critical issues such as cybersecurity, universal service, online safety, privacy, spectrum management, and broadband deployment and usage. In addition, this initiative would seek to leverage existing international institutions such as the Organization for Economic Cooperation and Development (OECD) and the International Telecommunication Union (ITU), an agency of the United Nations, by devoting additional NTIA staff resources to develop policy and regulatory tools as well as accurate metrics to effectively measure the growth and impact of the global Internet Economy.

Proposed Actions:

NTIA's initiative would use a multi-stakeholder approach to lead U.S. policymakers and regulators, governments around the world, and industry, in the formation of Internet policies and best practices to ensure continued innovation in Internet-based services and products, the growth of the global Internet economy, Internet-savvy intellectual property protection regimes, and the protection of consumers and children. To fulfill its duty as principal telecommunications and information policy adviser to the President, the NTIA must have the resources and expertise to take a leadership role in developing Federal government policy in such areas.

Just as the U.S. Government led the world in creating a policy framework for the first phase of the Internet, so too must the U.S. Government show leadership in this new era. At stake are the commercial interests of U.S. Internet companies and the continued role of the Internet as a platform for education, research, and political expression. President Obama has called for harnessing the immense transformative power of technology and innovation to improve the lives of all Americans and spur the economy. Former Secretary of Commerce Gary Locke observed "the vital role the Internet plays in driving innovation throughout the economy," and that "the Department has made it a top priority to ensure that the Internet remains open for innovation. . . ." The Department created an Internet Policy Task Force to identify leading public policy and operational challenges in the Internet environment. These activities fall within the Department of Commerce Strategic Goal – Innovation and Entrepreneurship. The economic benefits provided by the Internet economy increased during our recent economic downturn, when e-commerce significantly outpaced overall retail sales growth. Globally, the Internet economy is growing even faster. The global Internet marketplace is critical to the United States because it leverages America's strength in first-time innovation, which permits the United States to excel in any business environment where innovation is a market prerequisite.

Guiding the development of Internet Policy 3.0 requires using a broad spectrum of tools, many of which will require leveraging and coordinating private sector, civil society, technical community, and government cooperation. This initiative describes the resources necessary to lead, engage, and build multistakeholder coalitions both domestically and globally that will carry the Internet Policy 3.0 message around the world and see that it is successfully implemented in legislative and regulatory venues.

By engaging in promotion of the global Internet economy, NTIA proposes to extend the initial work of the Department's Internet Policy Task Force (IPTF). NTIA drove the formation of the IPTF in mid FY 2010 and is leading its efforts in coordination with the Office of the Secretary. The IPTF's mission is to identify leading public policy and operational challenges in the Internet environment. It has already leveraged expertise across many bureaus, including those responsible for cybersecurity standards and best practices, domestic and international information and communications technology policy, international trade, intellectual property, business advocacy, and export control. The FY2011-2012 results for the IPTF will include the broad articulation of policy frameworks necessary to enable continued Internet innovation. The purpose of this initiative is to see that those frameworks are implemented. Given the reliance on global, multi-stakeholder coalition building, the resources needed for the implementation phase far exceed those used in the initial development of the frameworks.

The IPTF has addressed issues in the following areas:

1) Privacy
2) Cybersecurity
3) Online Copyright Protection

4) Free flow of information

The increase will provide the policy and technical expertise, and empirical foundation, and the necessary fora for government and private sector actions. Each issue area, however, will be addressed using a common approach: leading development of global, multi-stakeholder organizations to advance U.S. Internet policy goals. In addition, the IPTF is considering additional issue areas that warrant broad collaboration.

Each issue under the Task Force, and the programs being created for each issue area, require particular and specialized staff expertise (special industry knowledge, policy training, and technical background). Many of the projects require bringing order to all the disparate activities underway throughout the Administration and being responsible for communications and negotiations with high-level private sector industry and civil society leaders. This requires a core team of seasoned, senior experts in areas that include:

- Internet law and policy analysis
- Internet economics
- Web and Internet technology
- International outreach

Statement of Need and Economic Benefits:

In the space of a decade and a half, the Internet has gone from an interesting academic and defense communications tool to an unimaginably important foundation of modern civilization. The Internet now has the ability to act as a key driver for the creation of enterprises and communities. The Internet contributes directly and indirectly to the U.S. economy and affects the lives of every citizen in myriad ways. As cited in the DOC privacy Notice of Inquiry, April 23, 2010, and according to Census figures and published reports, between 1999 and 2007, business-to-consumer online commerce increased over 500 percent. Taking into account business-to-business transactions, online commerce in 2009 accounted for approximately $3.4 trillion in shipments, sales, and revenue for the U.S. economy. U.S. mobile commerce has grown to $1.2 billion. In addition to the growth of online commerce, the World Wide Web and associated information systems have led to an unprecedented growth in productivity.

Need for FTEs (Privacy): The FTEs are needed to take on the tasks of the initiative: to establish a Privacy Policy Office; to develop the recommendations of the IPTF through public events and reports; to create global guidelines; to create enforcement mechanisms; and to negotiate with industry on adoption.

Need for FTEs (Cybersecurity and Other Internet Issues): The FTEs are needed to accomplish the tasks of the initiative: to bring network security and vulnerability expertise to the report described above, to develop the capacity-building program, and to address and help implement the recommendations of the IPTF.

In addition, the FTEs are needed to address the online copyright issues and proposals raised through the IPTF and by the NBP by analyzing the issues, creating interagency processes as necessary, undertaking research, and taking steps to implement particular recommendations.

Need for FTEs (Global Internet Economy): The FTEs will participate with international organizations and governments in bilateral and multilateral meetings and follow-on activities and will organize regional summits. The FTEs will also develop strategies to achieve U.S. Government objectives and will also develop and implement additional recommendations of the IPTF.

This initiative among other things addresses issues that have the potential to undermine the Internet's economic success. If policies could guarantee privacy, copyrights, security, safety, and international adoption, the Internet would become even more widely used for commerce or business. Even a small percentage increase would translate into millions or billions of dollars of the national economy.

Beyond the boundaries of commerce, the Internet is transforming critical sectors of the U.S. and global society, such as health care, energy, education, the arts, and political life. The Internet is also the base of new forms of civic engagement and participation, thereby promoting a diversity of opinions and enhancing transparency, accountability, privacy, and trust. The growth of commerce, of new social media applications and of the growing pervasiveness of Internet services require reexamination of existing frameworks regarding privacy, security, protecting intellectual property, and protecting children online.

Innovation and the Internet are nearly synonymous, yet we cannot take for granted that the United States will remain the leader in either. This initiative will develop new approaches in relevant areas. It will encourage innovation within the United States and also through its global outreach effort. Implementation of the policies will enable innovative information applications and services. The benefits are potentially broad and extensive, and yet intangible and not subject to simple measurement.

Base Resource Assessment:

NTIA does not currently have sufficient base program resources to accomplish the objectives of the Internet Innovation initiative. NTIA's base plan has historically provided funding for analysis of traditional telecommunications. NTIA's programs have provided funding for activities involving regulated wired and wireline telephony, as well as spectrum management.

NTIA has limited base funding to broaden its activities into analysis of subjects affecting Internet use and innovation or such a broad range of issues. NTIA's involvement in the DOC IPTF, for example, is the first time NTIA has undertaken a policy assessment of privacy issues since the mid-1990s, when the policy office had approximately twice the staff. NTIA has in some areas been able to undertake issue-scoping exercises, or in the case of Child Online Protection, the organization of meetings of a task force created by Congress. NTIA's base program does not support more in-depth economic or technical studies or multi-stakeholder activities to implement policies.

The Internet Policy Task Force (IPTF) referred to above, commits NTIA to a series of deliverables beyond its current base program. Moreover, in March 2010, a task force of Federal Communications Commission staff released the National Broadband Plan (NBP), which contained a series of recommendations for Executive branch policies. NTIA's Administrator is co-chair of the Broadband Subcommittee of the National Science and Technology Council's Committee on Technology. The issues being addressed by both the IPTF and the Broadband Subcommittee fall under NTIA's responsibilities as principal adviser to the President on communications and information policies as they pertain to the Nation's economic and technological advancement. In past years, some of the

projects covered by this initiative may have fallen under the Department's Technology Administration, which undertook work in privacy and related issues until its termination in 2007.

Schedule & Milestones:

Privacy

- FY 13: Public meetings/symposia; economic assessment and report
- FY 13-14: Creation of privacy enforcement mechanisms; negotiation with industry regarding adoption of guidelines

Cybersecurity and other issues

- FY 12: Public meetings/symposia; economic assessment and report
- FY 12-13: Creation of cybersecurity best practices; negotiation with industry regarding adoption of codes of conducts; leadership in international organizations
- FY 12: With DOC's Patent and Trademark Office, publish updated report on online copyright protection.

Global Internet Economy

- FY 12: Targeted regional workshop to advocate Internet Policy 3.0
- FY 13: Targeted regional workshop to advocate Internet Policy 3.0

Deliverables:

Privacy

- FY 12: Proposed privacy guidelines for public comment; notices of inquiry; symposia on issues
- FY 12-13: Bilateral and multilateral meetings
- FY 13: Final privacy guidelines; negotiation with industry stakeholders; development of new policies, e.g. regarding lawful surveillance and the role of Internet Service Providers

Cybersecurity

- FY 12: Publish Administration White paper
- FY 12-13: Bilateral and multilateral meetings
- FY 12- 13: Best practices and codes of conduct; negotiation with industry stakeholders; development of new policies, e.g. botnets

Online Copyright Protection

- FY 12: Symposium

Global Internet Economy

- FY 12-14: International agreement on principles following policy summits and treaty conferences

PERFORMANCE METRICS

Performance Goal: Innovation and Entrepreneurship Number of new policies adopted	**FY 2011 Actual**	**FY 2012 Target**	**FY 2013 Target**	**FY 2014 Target**	**FY 2015 Target**	**FY 2016 Target**	**FY 2017 Target**
With Increase	N/A	2	3	4	4	4	4
Without Increase	N/A	0	0	0	0	0	0
Description: This measure is focused on formulating recommendations through the Internet Policy Task Force (IPTF) pertaining to privacy, cybersecurity, online copyright, and the global, free flow of information. Such policies will be advanced through policy papers, speeches, and domestic and international conferences.							

Performance Goal: Innovation and Entrepreneurship Number of policies in accord with United States positions	**FY 2011 Actual**	**FY 2012 Target**	**FY 2013 Target**	**FY 2014 Target**	**FY 2015 Target**	**FY 2016 Target**	**FY 2017 Target**
With Increase	N/A	2	2	2	2	2	2
Without Increase	N/A	0	0	0	0	0	0
Description: This measure is focused on advancing and gaining agreement on policy proposals of the IPTF, given the global nature of the Internet, through engaging stakeholders internationally-- at conferences, meetings of international telecommunication organizations, and discussions with individual countries, industry stakeholders, and other non-governmental organizations.							

PROGRAM CHANGE PERSONNEL DETAIL

Activity: Salaries and Expenses
Subactivity: Domestic and International Policies

Title:	Location	Grade	Number of Positions	Annual Salary	Total Salaries
Internet Privacy					
Telecommunications Policy Specialist	Washington, DC	GS-15	1	123,758	123,758
Telecommunications Policy Specialist	Washington, DC	GS-14	1	105,211	105,211
Telecommunications Policy Analyst	Washington, DC	GS-12	1	74,872	74,872
Cybersecurity & Other Internet Issues					
Telecommunications Policy Specialist	Washington, DC	GS-15	1	123,758	123,758
Telecommunications Policy Analyst	Washington, DC	GS-9	1	51,630	51,630
Global Internet Economy					
Economist	Washington, DC	GS-15	1	123,758	123,758
Telecommunications Policy Specialist	Washington, DC	GS-13	1	89,033	89,033
Total			7		692,020
less Lapse		25%	(2)		(173,005)
Total full-time permanent (FTE)			9		865,025
2013 Pay Adjustment (0.5%)					2,595
TOTAL					867,620

Personnel Data	Number
Full-Time Equivalent Employment	
Full-time permanent	9
Other than full-time permanent	0
Total	9
Authorized Positions:	
Full-time permanent	7
Other than full-time permanent	0
Total	7

PROGRAM CHANGE DETAIL BY OBJECT CLASS

(Dollar amounts in thousands)

Activity: Salaries and Expenses
Subactivity: Domestic and International Policies

	Object Class	2013 Increase
11	Personnel compensation	
11.1	Full-time permanent	$522
11.3	Other than full-time permanent	0
11.5	Other personnel compensation	0
11.8	Special personnel services payments	0
11.9	Total personnel compensation	522
12	Civilian personnel benefits	147
13	Benefits for former personnel	0
21	Travel and transportation of persons	62
22	Transportation of things	2
23.1	Rental payments to GSA	37
23.2	Rental Payments to others	0
23.3	Communications, utilities and miscellaneous charges	13
24	Printing and reproduction	12
25.1	Advisory and assistance services	0
25.2	Other services	20
25.3	Purchases of goods & services from Gov't accounts	98
25.4	Operation and maintenance of facilities	0
25.5	Research and development contracts	0
25.6	Medical care	0
25.7	Operation and maintenance of equipment	9
25.8	Subsistence and support of persons	0
26	Supplies and materials	4
31	Equipment	5
32	Lands and structures	0
33	Investments and loans	0
41	Grants, subsidies and contributions	0
42	Insurance claims and indemnities	0
43	Interest and dividends	0
44	Refunds	0
99	Total obligations	931

Exhibit 10

Department of Commerce
National Telecommunications and Information Administration
Salaries and Expenses
PROGRAM AND PERFORMANCE: DIRECT OBLIGATIONS
(Dollar amounts in thousands)

Activity: Salaries and expenses
Subactivity: Spectrum management

Comparison by line item		2011 Actual		2012 Enacted		2013 Base		2013 Estimate		2013 Increase/ (Decrease)	
		Personnel	Amount	Personnel	Amount	Personnel	Amount	Personnel	Amount	Personnel	Amount
Spectrum management.....	Pos/BA	32	$8,144	32	$7,486	32	$7,560	32	$7,183	0	($377)
	FTE/Obl.	25	8,339	32	8,644	32	7,560	32	7,183	0	$ (377)
Direct Obligations.....	Pos/BA	32	8,144	32	7,486	32	7,560	32	7,183	0	(377)
	FTE/Obl.	25	8,339	32	8,644	32	7,560	32	7,183	0	(377)

Activity: Salaries and expenses
Subactivity: Spectrum management
Line Item: Wireless Broadband Access (500 MHz)

Comparison by line item		2011 Actual		2012 Enacted		2013 Base		2013 Estimate		2013 Increase/ (Decrease)	
		Personnel	Amount	Personnel	Amount	Personnel	Amount	Personnel	Amount	Personnel	Amount
Wireless Broadband Access (500 MHz)...	Pos/BA	0	$0	0	$0	0	$0	7	$1,234	7	$1,234
	FTE/Obl.	0	0	0	0	0	$0	5	1,234	5	1,234
Direct Obligations.....	Pos/BA	0	0	0	0	0	0	7	1,234	7	1,234
	FTE/Obl.	0	0	0	0	0	0	5	1,234	5	1,234

SUBACTIVITY: SPECTRUM MANAGEMENT

The objectives of the Spectrum Management subactivity are to:

- Execute the spectrum management functions and activities assigned to NTIA under 47 U.S.C. 902 and 903;
- Develop, establish, and implement plans, policies, activities, capabilities and procedures to ensure that the U.S. spectrum policy, spectrum allocations and spectrum management capabilities and processes stay up with the needs of the Federal agencies and the American public for access to the radio spectrum in the 21st century domestically and internationally;
- Ensure Federal agencies use the radio spectrum efficiently and only occupy the spectrum as necessary to perform their missions;
- Plan for and enable performance of Federal spectrum management functions during emergencies;
- Coordinate and register internationally planned Federal Government satellite networks and selected assignments for terrestrial systems; to work cooperatively with the Federal Communications Commission and the Federal agencies in coordinating spectrum use; and
- Develop, implement, and maintain the automated information technology capabilities necessary for performing these activities.

These activities fall within the Department of Commerce Strategic Goal – Innovation and Entrepreneurship: Develop the tools, systems, policies, and technologies critical to transforming our economy, fostering U.S. Competiveness, and driving the development of new businesses. Within NTIA, they are carried out by the Office of Spectrum Management (OSM).

Interdepartment Radio Advisory Committee (IRAC) Support

NTIA will continue to maintain and update the NTIA Manual of Regulations & Procedures for Federal Radio Frequency Management governing the Federal spectrum, and provide the management and administrative support to the Interdepartment Radio Advisory Committee (IRAC), the Executive Branch interagency advisory body for Federal spectrum management. The IRAC is composed of the representatives of 19 Federal agencies and an FCC liaison. Through the Space Systems, Spectrum Planning, Technical, Radiocommunication Conference, Emergency Planning and Frequency Assignment Subcommittees as well as numerous ad hoc groups, the IRAC advises NTIA on spectrum policy and procedural matters, develops Federal positions on international radio treaty conferences, and provides recommendations for conflict resolution. NTIA chairs and provides secretariat support and maintains the archive of all documents for the committee.

Domestic Spectrum Policy

In coordination with the IRAC, NTIA develops and implements policies regarding spectrum use by the Federal agencies. At the same time, NTIA develops Executive Branch views and inputs on FCC decisions that may affect Federal operations.

When necessary, NTIA convenes the Policy and Plans Steering Group (PPSG), a body of senior level representatives of Federal agencies whose missions require significant use of the radio frequency spectrum resource. The PPSG deals with particularly contentious or difficult

issues or issues of a long term or strategic nature. NTIA provides management and administrative support to this body.

The OSM Domestic Policy Division conducts spectrum training courses and seminars for U.S. and foreign spectrum managers. The Division coordinates these courses, drawing upon experts from other divisions of OSM as well as various Federal agencies and the private sector. The Division also develops and provides to the public information, on the web or in print, describing Federal spectrum management and use.

NTIA, in coordination with the DOC Office of Security, maintains a security program that adheres to HSPD–12. The security program initiates and processes requests for background investigations for applicants and current NTIA personnel; forwards up-to-date national security information to supervisors and employees in their organization; assists a senior facility manager in coordinating a physical security risk assessment of his facility; assists the head of the organization in ensuring that all persons with security clearances receive an annual refresher security briefing; requests assistance from the office of security in a security matter; certifies NTIA/OSM personnel security clearances for a visit to another agency or facility and validates security clearance notifications for non-NTIA personnel to engage in an NTIA/OSM sponsored meeting or event; and makes arrangements for security training to all OSM personnel.

International Spectrum Plans and Policies

NTIA, via the OSM International Spectrum Plans and Policies Division (ISPPD), provides leadership and participates with the State Department, FCC, Federal agencies, commercial industry, and private sector interests in preparing for diverse international radio treaty conferences, negotiations and fora on spectrum management, allocations, technical standards, and regulation. Specifically, NTIA coordinates and develops the Federal Government's contributions to the U.S. proposals for these treaty conferences and forums and helps prepare the preliminary and final U.S. positions. In many cases, NTIA representatives chair the national preparatory groups for these forums. In addition, these representatives are often called upon to chair or organize activities at an international level on behalf of the International Telecommunications Union (ITU). NTIA analyzes the known intentions and positions of other nations to determine whether U.S. counter-proposals are necessary. NTIA also participates in bilateral/multilateral negotiations and provides personnel and technical support for the U.S. delegations to radio treaty conferences and other ITU and regional administrative, policy, and technical forums. In addition, NTIA works toward building confidence worldwide in U.S. spectrum planning techniques to win support for U.S. positions in negotiations and forums. After each World Radiocommunication Conference, ISPPD leads efforts to develop and propose a plan to implement the results of the completed conference.

Strategic Planning

NTIA, via OSM's Strategic Planning Division (SPD) develops the Federal Strategic Spectrum Plan and prepares a comprehensive strategy to carry out spectrum management improvements to meet long range goals and objectives for Federal Spectrum Management, and develops the spectrum management architecture for the future and an overarching roadmap that will lead to improved means to assuring spectrum access and efficient and effective spectrum use across the Federal Government. The Division will : (1) investigate the means to gather, maintain and update accurate information relating to current and future

spectrum requirements, including collaborating and coordinating effectively among the various Federal agencies to obtain the necessary results to collectively execute the means in a unified approach; (2) develop a future architecture designed to incrementally improve Federal spectrum management and use; (3) investigate advanced technologies and concepts for the management of the spectrum that hold the potential for increasing the efficiency of spectrum use; and (4) assessing the continued effectiveness of spectrum allocations in light of changes in planned spectrum usage.

Emergency Preparedness and Public Safety

In recognition of the importance of public safety services to the American public and the importance of spectrum to these activities, NTIA provides the necessary leadership, technical expertise, applied research, policy guidance, and spectrum management support for the successful coordination of national public safety requirements, goals and objectives both within the Federal Government and state and local entities in coordination with the Department of Homeland Security and the FCC. NTIA will address and support the needs of: (1) Project SAFECOM; (2) a follow-on program (National Public Safety Telecommunications Council) to the Public Safety Wireless Advisory Committee (PSWAC) to further address PSWAC recommendations including satisfying future spectrum needs; (3) interoperability between Federal, state and local emergency entities; (4) national and international public safety standards; (5) new technology evaluation and testing; and (6) funding assistance for state and local agencies to adopt new technology (as per the Digital Television Act, P.L. 109-171). Consideration also will be given to shared and joint use plans, use of standard radio systems, and coordination processes with all Federal agencies.

NTIA will address and implement the new requirements of National Communications System (NCS) Directive 3-10 to provide the required continuity communications capabilities at both the NTIA primary and alternate operating facilities. NTIA also will maintain a viable Continuity of Operations (COOP) capability by: (1) enhancing the capabilities of the NTIA COOP Alternate Operating Facilities, (2) conducting COOP/Continuity of Government (COG) tests, training, and exercises for NTIA and IRAC personnel to include annual national exercises, and (3) supporting the National Response Framework (NRF) and upon activation of Emergency Support Function #2 by the Department of Homeland Security deploy (as needed) in support of the coordinated Federal response effort to provide Federal spectrum management services at the Joint Field Office or other designated facility.

NTIA will also serve in the capacity as an executive committee member to the Emergency Communications Preparedness Center. The Division will support the Assistant Secretary in that capacity while also serving as the working/focus group member for the Department.

Spectrum Services

NTIA, via the OSM Spectrum Services Division, reviews, processes, and authorizes Federal radio frequency assignments. NTIA also reviews each frequency assignment action to determine the degree of compliance with authorized use and will continue its reviews of Federal frequency assignments to evaluate the validity of current needs. This frequency assignment responsibility involves chairing the IRAC Frequency Assignment Subcommittee (FAS) as well as directing the subcommittee's activities and providing its administrative support. The assignment responsibility also involves ensuring that the spectrum needs of certain Federal agencies not represented on the IRAC and the spectrum access requirements of the United Nations and foreign embassies in the United States are satisfied. NTIA

maintains and updates files and records for radio spectrum management. The computerized files include the Government Master File of Frequency Assignments (GMF); portions of the FCC frequency records necessary for use in Federal spectrum management, especially the management of frequency bands allocated for shared Federal/non-Federal use; frequency allocation records; terrain elevation data; and Federal systems characteristics data used to support the processing of requests for spectrum certification. NTIA also coordinates Federal spectrum requirements with Canada and Mexico.

The Division also reviews proposed Federal radiocommunication systems to determine compliance with applicable Federal regulations and policies and to evaluate such systems for compatibility with other present and planned spectrum-dependent systems, providing guidance concerning frequency bands, design parameters, and appropriate operating constraints necessary to mitigate harmful interference and ensure effective use of available spectrum resources. NTIA, in accordance with the advice of the IRAC Spectrum Planning Subcommittee (SPS), approves or withholds certification of spectrum support for the system or, alternatively, indicates what adjustments to the system are needed to enable the certification to be approved. The spectrum certification responsibility involves chairing the SPS and directing the subcommittee's activities. NTIA performs certification reviews at the conceptual, experimental, developmental, and operational stages of a given system's procurement cycle, as required by OMB Circular A-11.

Spectrum Engineering and Analysis

NTIA, via the OSM Spectrum Engineering and Analysis Division, conducts in-depth analyses of spectrum use, technically reviews new Federal radiocommunication systems, including space systems; assists Federal agencies in resolving operational problems; provides technical engineering/policy analysis support for international radio treaty conferences; and establishes and improves Federal standards to assure efficient use of the spectrum. The in-depth studies evaluate the effect of existing and planned radiocommunication systems on the radio frequency spectrum and provide technical engineering support for domestic and international policy development and long range planning. These technical/policy analyses fall into two categories: the first focuses on the selected portions of the radio frequency spectrum and the second focuses on particular types of uses of the spectrum. Both types of studies examine present and planned equipment usage to determine if the spectrum is efficiently and effectively used, the potential for compatible sharing of Federal radio services, and the effects of proposed and planned national and international allocation changes on the ability of Federal agencies to complete their mandated missions. NTIA also investigates the possibility of increased sharing of spectrum resources between Federal and non-Federal radiocommunication systems in order to increase the efficient use of the spectrum within the United States. Results from field and laboratory measurements aid in the evaluation of frequency utilization, policy compliance, new technologies, and radio frequency interference.

The Division resolves operational conflicts that arise between Federal agencies regarding the use of the spectrum and coordinate the process of meeting spectrum requirements that cannot be satisfied within existing policies and procedures. These operational problems become known through NTIA studies or concerns from other agencies. Solving such problems demands analyses of the effects that proposed changes in frequency assignments, operational procedures, or equipment will have on the electromagnetic environment as well as consideration of the various tradeoffs between technical and operational factors. In support of international spectrum management, NTIA provides engineering analyses on technical issues

necessary to support U.S. participation in and preparation for international conferences and meetings.

National and international radio regulations ensure that various radio services can operate compatibly in the same environment without unacceptable levels of radio interference. These regulations focus primarily on radio systems using the same allocated bands. Recent years have seen a dramatic increase in the number of problems and spectrum issues involving adjacent band interference (i.e., interference from a transmitter operating in one band to a receiver operating in an adjacent allocated band). In the national and international marketplace, adjacent band problems surface as the search goes on to identify spectrum for an ever-expanding number of new and innovative radio-based telecommunication services continues. Billions of dollars of investment depend on the availability of spectrum and the resolution of in-band and adjacent band interference concerns through proper coordination or by effective equipment designs through the use of technologies. Within this environment, addressing the adjacent band interference problem has become a significant issue. The effects of adjacent band emission from transmitters and the characteristics of the adjacent band receiving equipment and its interference susceptibility to unwanted signals creates a particularly challenging problem because the FCC has not traditionally applied standards to receivers and cost factors have led to interference prone designs. NTIA has undertaken a comprehensive examination of adjacent band and man-made interference, including technical and regulatory issues.

NTIA evaluates new technologies that can be used to increase the efficiency with which the Federal and private sector use the radio spectrum that makes more spectrum available for emerging technologies, develops new engineering analysis capabilities to improve spectrum efficiency in the Federal frequency assignment process, uses advances in engineering modeling and information technology to improve existing Federal spectrum certification and frequency assignment processes, and develops measurement techniques to assess innovative adaptive sharing techniques between Federal and non-Federal systems.

Information Technology

NTIA, via the OSM Information Technology Division, will continue its activities relative to Systems Development, Network Engineering & Operations, Customer Support Operations, Systems Support, Enterprise Architecture, Information Assurance, and Project Management.

Systems Development -- NTIA will design, develop, and implement software and services that are necessary to optimize the spectrum authorization processes; optimize the Federal agencies' computer automated capabilities to manage their frequency spectrum assets; and provide the spectrum management community the optimal spectrum information (e.g., Federal Spectrum Management System) that will enable the Federal agencies to manage their spectrum assets without interference and within the current rules and regulations. The goal is to ensure that Federal agencies have access to accurate spectrum management data, that Federal agencies have the information technology tools necessary to use that data to develop new assignment application requests or changes to existing authorizations that comply with Federal regulations and procedures for using the radio frequency spectrum, and that NTIA has the information technology required to effectively process agency requests for frequency assignment authorizations in a timely manner. NTIA will also develop and improve engineering and analysis models and tools to support spectrum engineering and analysis and the spectrum authorization processes, review its automated analytical capability to ensure the methods of problem solving are appropriate for new communications systems and for state-of-

the-art changes in telecommunications technology, develop and enhance analytical computer programs that permit rapid computation of potential interference between existing and proposed communications systems. NTIA also supports design, development, and implementation of administrative/back office systems that support NTIA mission-specific functions including domestic and international telecommunications policy, financial management, human resources, and grants administration.

Network Engineering & Operations - NTIA will provide the information technology systems and services required for inter-office communications, processing frequency assignment requests, exchanging spectrum management information with Federal agencies using the radio-frequency spectrum, telecommunications grants administration, and providing the public with electronic access to spectrum management and telecommunications policy information. It will also maintain and enhance local area networks and use the Internet to support spectrum management activities (NTIA's unclassified local area network supports traditional office automation activities, such as e-mail and word processing. A classified local area network provides the NTIA staff with access to the computers that process frequency assignment actions and provides secure access to Federal spectrum managers via remote access servers and through the Secret Internet Protocol Router Network (SIPRNet). Internet servers provide spectrum management information on NTIA's World Wide Web pages. List-servers provide a means for electronic conferences); and provide the necessary coordination with and support of NTIA's Chief Information Officer (CIO) to implement guidance provided by the Department of Commerce CIO relative to information technology (IT). NTIA also serves as the Department of Commerce SIPRNet and Information Sharing Environment program office, providing a centralized, managed interconnection to the multiple systems at varying security levels.

Customer Support Operations – NTIA provides the Bureau's IT users a central point of contact for NTIA and Department of Commerce provided services. It serves as liaison to DOC in securing telephone and other services supplied by the Department, as well as reporting and tracking of requests and anomalies. It coordinates user based support activities with NTIA IT support groups, allowing the user to have a single interface for problem reporting, status updates, and resolution confirmation. It provides direct support of Desktop services of classified and unclassified systems.

Systems Support - NTIA will modify and maintain the production software and databases necessary to operate the spectrum authorization process; provide the Federal agencies the computer automated capability to manage their frequency spectrum assets; and provide the spectrum management community the necessary spectrum information, which will enable the Federal agencies to manage their spectrum assets without interference and within the current rules and regulations. Additionally, as the new Federal Spectrum Management System is placed into production, NTIA will provide the application, database, and end-user support necessary to ensure a smooth transition from the legacy system to the new system.

Enterprise Architecture - NTIA will provide the business strategy and operational transformation to support the information technology required for NTIA to manage the Federal Government's use of the radio frequency spectrum, formulate international information and communications policy, goals, and strategies; enhance the public interest by generating, articulating, and advocating creative and influential policies and programs in the telecommunications and information sectors; and to assist public and non-profit entities in effectively using telecommunications and information technologies to better provide public services and advance other national goals.

This will ensure that the business of NTIA supports the Government's goals for providing value to the public through citizen-centered, results-oriented, and market-based approaches. This is accomplished by providing a common framework for improvement in the following areas:

- Budget Allocation
- Information Sharing
- Performance Measurement
- Budget/Performance Integration
- Cross-Agency Collaboration
- E-Government
- Component-Based Architectures

These methodologies will be used for all Information Technology projects.

Enterprise Architecture (EA) will assure alignment of NTIA business processes with NTIA objectives by conducting a maturity assessment of NTIA's EA using as a guideline OMB's EA Assessment framework. A plan for improvement will be developed, if necessary.

EA assists with capital planning and purchasing by aligning the NTIA EA model with the following documents and processes:

- OMB Federal Enterprise Architecture (FEA) Model;
- Exhibit 300 Capital Asset Plans and Business Cases;
- NTIA IT Strategic Plan and OSM Acquisition Plan and budget planning process;
- Conducting a maturity assessment using the Commerce IT Capital Planning and Investment Control Maturity Model;
- Updating the Federal Spectrum Management System's risk management processes to be consistent with the Department of Commerce's risk management standards; and
- Processing IT related purchase requests ensuring all requests meet established guidelines, procedures, and architectural compliance.

Information Assurance - NTIA will provide compliance with applicable information technology laws and regulations regarding the security of information systems and communications security. In support of future system requirements, Information Assurance will design, develop, and implement the policies and procedures that will allow implementation of cross-domain security systems that protect national security information while simultaneously providing greater access to Federal spectrum managers and the public to spectrum management data. Information Assurance includes certification and accreditation of system; active monitoring of systems, networks, and applications to ensure compliance with security related parameters; maintenance of a computer incident response capability; and Federal Information Security Management Act (FISMA) reporting.

Project Management - NTIA will plan, charter, and establish a Program Management Office (PMO) in order to standardize and more effectively manage NTIA IT projects, maximize returns on investment, provide better reporting to NTIA and DOC management, and ensure compliance with all OMB and GAO mandates, regulations, and recommendations regarding project planning and execution. The PMO will provide the leadership that will enable the Administration to manage its IT portfolio, programs, and projects utilizing sound project management methodologies based on industry best practices as presented in the Project Management Institute's Project Management Body of Knowledge Guide and The Standard for

Program Management. NTIA established a PMO charter, scope statement, and management team; developed the PMO implementation plan; and partnered with an industry expert to establish the NTIA PMO organizational and mission constructs. Effective portfolio management is essential to achieving the mission and objectives of NTIA. The NTIA PMO will develop and implement portfolio management tools and processes to ensure that IT Project Managers conduct projects in a disciplined, well-managed, and consistent manner so that quality products are completed on time and within budget. The systematic process for portfolio management will ensure that project needs are prioritized and governed by importance to the Administration's mission rather than by urgency. NTIA will conduct impact analyses for projects within the portfolio, including project impacts resulting for schedule, work force, and resource changes. The NTIA PMO will partner with the NTIA EA office in working with DOC procurement organizations to establish and subsequently assist in the management of IT procurements that are in response to NTIA's business needs. The NTIA PMO will develop and implement contract management processes and procedures in order to ensure that new IT procurements are planned and executed in a timely manner.

NTIA ensures compliance with applicable information technology laws and regulations regarding the operation, information assurance, including continuity of operations, communications security, emergency operations, and procurement of IT products and services. NTIA has established an Enterprises Architecture Council to ensure IT capital investments are made wisely and in coordination with all business processes. IT also maintains an active Emergency Relocation Site to meet the National Security/Emergency Preparedness functions of the NTIA.

During FY 2013, NTIA's OSM will:

- Support the Wireless Innovation and Infrastructure Initiative (WI3) effort to free spectrum for commercial use;
- Provide IRAC Support administrative services for the IRAC, its subcommittees, and ad hoc groups (benefits realized through the year);
- Maintain the Manual of Regulations and Procedures for Federal Radio Frequency Management (benefits realized through the year);
- Maintain the Federal Spectrum Inventory and web presentation for public access (benefits realized to improve transparency of Federal spectrum usage through the year);
- Complete FSMS/Spectrum XXI Release 2.0 in FY13 (benefits realized in FY14 and out years via modernized databases and engineering algorithms);
- Complete one United States Telecommunications Training Institute (USTTI) course for foreign students and two courses on Federal spectrum management (benefits realized at the completion of the courses);
- Implement policies regarding spectrum use by the Federal agencies and respond to FCC decisions that may impact Federal operations (benefits realized through the year);
- Review and improve international spectrum management policies, including U.S. processes for World Radiocommunication Conferences (WRCs), outreach efforts to foreign administrations, and participation and representation in international fora addressing spectrum management policies (benefits realized leading up to the WRC in 2015);
- Provide leadership and participate in ITU-Radiocommunication Sector (ITU-R) Study Activities affecting international treaty text, technical studies in preparation for WRCs, and development of regional positions (benefits realized at the WRC in 2015);

- Review Federal space systems for compliance with Federal and non-Federal regulations, and participate in satellite coordination meetings with other administrations (benefits realized through the year);
- Provide updated version to the Federal Strategic Spectrum Plan or an updated strategic planning process in FY13 (benefits being realized in FY14 and out years to improve Federal spectrum planning and policy);
- Maintain a viable alternate COOP site and capability so that its Primary Mission Essential Function of spectrum management can continue to be performed should its primary site be inaccessible (benefits realized through the year);
- Provide cognizant spectrum management liaison support to the National Response Framework, specifically Emergency Support Function 2, so that Federal requirements can be met in the event of a natural or man-made disaster (benefits realized through the year, but particularly during hurricane season);
- Serve as the Department of Commerce representative to the Emergency Communications Preparedness Center so that emergency responders have the necessary tools to communicate with each other in the event of a disaster (benefits realized through the year);
- Review and coordinate requests from Federal agencies for frequency assignments in a thorough and timely manner (benefits realized through the year);
- Review and process requests from Federal agencies for certification of spectrum support in a thorough and timely manner (benefits realized through the year);
- Improve the methods and procedures used to process requests for frequency authorizations and certification of spectrum support to ensure equitable and expeditious access to the radio spectrum resource (benefits realized through the year),
- Complete the Spectrum Sharing Innovation Test-Bed Pilot Program, evaluating the ability of devices employing Dynamic Spectrum Access sharing techniques to compatibly operate with systems in the land mobile radio service frequency bands (benefits realized in the following years);
- Complete the technical studies identifying changes to the Federal regulations, procedures, and processes necessary to improve spectrum efficiency in the land mobile radio, fixed, and radiolocation service frequency bands (benefits realized through the year);
- Migrate the NTIA Data Center to the Herbert C. Hoover Building's Consolidated Server Area; and
- Implement the electronic exchange of information between the OSM and National Archives and Records Administration (NARA).

Interdepartment Radio Advisory Committee (IRAC) Support: NTIA will:

- Provide the necessary leadership and administrative support for the IRAC, its subcommittees, and ad hoc groups as the committee provides advice to NTIA on spectrum management, including coordination of spectrum use, review of spectrum plans, development of Federal technical standards, emergency planning, satellite registration and coordination, international conference preparations, and development of coordination arrangements with Canada and Mexico;
- With the advice of the IRAC, coordinate with the FCC views on all technical and policy decisions under consideration by the FCC which may impact Federal operations, and decisions under consideration by NTIA which may impact non-Federal operations;
- Develop and update the Federal Government rules and regulations necessary to manage the Federal Government's use of the spectrum including those governing the relationships between the FCC and the NTIA;
- Provide public access to the IRAC and to releasable spectrum management

information; and
- Improve and upgrade the electronic archives of the IRAC and distribute it periodically to the NTIA staff and Federal agencies.

Domestic Spectrum Policies: NTIA will:

- Provide leadership and support for the Policy and Plans Steering Group, an interagency advisory committee whose membership includes representatives from those Federal agencies whose missions require significant use of the radio frequency spectrum resource. The representation of the Federal agencies on this committee will be limited to individuals holding the rank equivalent to Assistant Secretary in their respective agencies; the role of this committee will be advisory and this committee will report to the Assistant Secretary of Commerce for Communications and Information. This forum will serve as a significant mechanism for resolving spectrum policy issues within the Executive Branch.
- Plan and conduct spectrum training courses and seminars for U.S. and foreign spectrum managers;
- Respond to queries from the private sector relative to the use of spectrum by the Federal Government;
- Develop and disseminate via the web and printed materials information describing Executive Branch spectrum management and Federal agency use of spectrum; and
- Develop and implement policies regarding spectrum use by the Federal agencies.

International Spectrum Plans and Policies: NTIA will:

- Coordinate, develop, and present the Federal Government's contribution to U.S. proposals and positions for international fora where radio frequency spectrum management issues are addressed such as the ITU World and Regional Radiocommunication Conferences, ITU Plenipotentiary Conferences, ITU Council, ITU Standards Conferences, the ITU Development Conferences, and the Organization of American States' Inter-American Telecommunication Commission (CITEL);
- Analyze other administration's proposals to determine the impact on U.S. spectrum requirements:
- Develop and implement a plan for ongoing outreach strategies to facilitate gaining international support for U.S. positions;
- Lead or participate in and contribute to ITU-Radiocommunication Sector study groups and other international telecommunication regulatory fora;
- Participate in and contribute to other international fora dealing with radio spectrum issues such the North Atlantic Treaty Organization (NATO) Joint Civil/Military Committees, the International Civil Aviation Organization and the International Maritime Organization.
- Chair the IRAC Radio Conference Subcommittee (RCS) and through this forum coordinate Federal Government positions and proposals to be submitted to international fora involved in spectrum management matters;
- Consult with foreign countries on reforming their spectrum management processes to use the spectrum more efficiently and effectively;
- Lead and participate in bilateral and multilateral meetings on spectrum management issues with foreign administrations including bi-lateral frequency coordination agreements with Mexico and Canada;

- Implement the results of international radio treaty conferences by recommending changes to U.S. domestic rules;
- Chair the IRAC ad hoc group on WRC Implementation;
- Provide leadership on spectrum-related issues that come before the ITU Council and Plenipotentiary Conference;
- Review Federal space systems for compliance with national requirements, coordinate with other Federal and non-Federal radiocommunication systems, and participate in satellite coordination meetings with other administrations;
- Chair the IRAC Space Systems Subcommittee;
- Coordinate non-Federal space systems with Federal radiocommunication systems;
- Develop spectrum policies relative to satellite operation, national and international coordination, notification, and advanced publication;
- Negotiate satellite coordination agreements with foreign countries relative to either Federal Government satellite operations or foreign government satellite operations;
- Coordinate with the FCC on both domestic satellite systems and Federal Government systems. Provide recommendations on FCC rulemakings on space allocations and rules and regulations;
- Provide comments to the FCC on rulemakings concerning international activities;
- Provide support and technical analysis in cooperation with other Department offices to promote U.S. product sales to other countries;
- Initiate and conduct scientific and technical cooperation in the field of telecommunications and spectrum management with specific foreign countries in accordance with U.S. foreign and international trade policy objectives;
- Identify regulatory and procedural barriers to the timely and global implementation of United States innovations in radiocommunications technologies and services and recommend methods to remove those barriers;
- Participate in and contribute to Federal strategic spectrum planning on emerging technologies such as dynamic spectrum access, and incorporate domestic activities in international planning; and
- Lead and participate in international spectrum management training activities including support for the USTTI.

Strategic Planning: NTIA will:

- Develop, coordinate, and execute an integrated program that responds to the basic tenets of the Spectrum Policy Initiative for the 21st Century (SPI);
- Promote and bring awareness to the outcomes of the SPI.
- Develop long range goals for Federal Spectrum Management that will include the development of a spectrum management architecture for the future and coordinate among affected stakeholders;
- Assist the Federal agencies in maintaining and updating their agency-specific spectrum plans defining current and future spectrum requirements; to include the identification of those spectrum efficiency enhancing technologies under consideration;
- Develop a methodology and provide an implementation for an NTIA capability to electronically compile, store, update, and analyze current and future spectrum requirements for all the Federal agencies that will include how, where, and when it is intended to be used;
- Maintain and update the Federal Strategic Spectrum Plan—biennially—and coordinate the Plan with appropriate Federal agencies;

- Assist the Federal agencies and the Office of Management and Budget with incorporating the consideration of spectrum-related requirements within the capital planning process;
- In coordination with the FCC, assist in the development and updating of a National Strategic Spectrum Plan to include appropriate coordination with affected Federal agencies and other executive components;
- Assist NTIA's Office of Policy and Development in formulating, revising and advocating plans and policies that provide both market and non-market based incentives for Federal agencies to implement spectrum efficient concepts and technologies in their respective acquisitions of mission-related systems;
- Investigate and develop a future Federal spectrum management architecture that considers advanced and spectrum efficient concepts to improve the effectiveness and efficiency of spectrum use by the Federal agencies and thereby increase the spectrum availability in fulfilling the national interest for national security, public safety and economic opportunities; and
- Provide monitoring of and annual reporting on the achieved progress toward the satisfaction of the United States Spectrum Policy for the 21st Century in coordination with Federal agencies and other relevant components of the Executive Branch.

Emergency Planning and Public Safety: NTIA will:

- Support implementation of WI3's efforts to build a public safety broadband network;
- Develop Public Safety Telecommunications Policy consistent with Administration goals;
- Provide leadership, liaison, and guidance for the integration of National Public Safety telecommunications systems, ensuring inter-operability among Federal, state, and local public safety agencies; and provide for the spectrum needs of these integrated systems,
- Provide the necessary leadership, technical expertise, applied research, policy guidance, and spectrum management support for the successful coordination of national public safety requirements, goals and objectives both within the Federal Government and the state and local entities in coordination with the FCC;
- Identify current and future technology which could enhance interoperability;
- Develop security/emergency preparedness and long-range plans for use of the spectrum;
- Develop procedures and incorporate them in the planning process for a timely and orderly transition from normal to emergency modes;
- Participate with other Federal agencies in communications emergency readiness planning and implementation;
- Formulate and advocate plans and policies necessary to the development of strategies to improve and restore U.S. telecommunications resources;
- Develop and modify spectrum policies and procedures for crisis-related situations under the National Response Framework, specifically Emergency Support Function 2;
- Provide emergency readiness planning for the Federal use of the radio frequency spectrum;
- Identify and provide solutions to issues and deficiencies in the national security/emergency preparedness communications planning process in support of the National Communications System (NCS);
- Serve as the Department's working group and focus group representative for the Emergency Communications Preparedness Center; and

- Maintain a viable NTIA continuity of operations (COOP) capability.

Spectrum Services: NTIA will**:**

- Process Federal agencies requests for frequency assignment authorizations and actions;
- Provide Federal agencies with accurate spectrum management data;
- Assist non-IRAC agencies in identifying spectrum to meet their radiocommunications needs;
- Resolve conflicting requirements concerning Federal agencies' use of the spectrum;
- Evaluate proposed Federal radiocommunications systems for certification for spectrum support in accordance with OMB Circular A-11;
- Identify and implement the information technology capabilities required to satisfy the needs of the Federal agencies for computer automated tools to assist in the preparation of frequency authorization and spectrum certification requests, the determination of compliance with rules and regulations, and the prediction and mitigation of interference;
- Participate in the negotiation of spectrum coordination agreements and spectrum sharing protocols with Mexico and Canada;
- Coordinate requests for radio frequency assignments in the U.S./Canadian border area in order to ensure interference-free operations to both the U.S. and Canada;
- Coordinate FCC requests for Special Temporary Authorizations from the private sector when such requests use spectrum that is allocated for Federal use on a primary or shared Federal/non-Federal basis; and
- Chair the IRAC Frequency Assignment and Spectrum Planning Subcommittees (FAS and SPS) and through these forums, coordinate the processing of requests by the Federal agencies for frequency assignment and spectrum certification actions.

Spectrum Engineering and Analysis: NTIA will:

- Assess the present and projected Federal use of the spectrum by conducting studies of spectrum use, concentrating on bands and services involving: upcoming international radiocommunication conferences, Federal and non-Federal sharing, and those areas where significant improvements in utilization appear possible;
- Resolve spectrum sharing problems concerning conflicts between Federal agencies or between Federal and non-Federal spectrum users, and identify any changes to existing spectrum policies and procedures that could minimize such problems in the future;
- Provide technical engineering support to the IRAC and its subcommittees, especially in the area of spectrum standards, FCC proposed rulemaking, improved frequency coordination procedures, and resolving reported interference cases;
- Undertake a comprehensive examination of adjacent band interference, including technical and regulatory issues, and make appropriate recommendations;
- Evaluate new technologies, applicable to various radio services and frequency bands, to determine their potential spectrum efficiency and usefulness for Government applications;
- Develop plans for intra-service and inter-service sharing in selected bands;
- Define new or improved automated techniques for the study of spectrum sharing, interference prediction, and frequency coordination;
- Plan and coordinate spectrum measurements in selected frequency bands to support ongoing studies involving spectrum sharing, radio interference, spectrum standards, spectrum policy development, frequency coordination, and/or spectrum efficiency;

- Provide technical support in performing research and development of automated spectrum engineering and analysis capabilities;
- Provide technical engineering and policy analysis support in preparation for and participation in international radiocommunication conferences and in development of domestic spectrum policy and long-range planning; and
- Chair the IRAC Technical Subcommittee (TSC) and through this forum, coordinate and develop spectrum standards that apply to all Federal systems.

Information Technology: NTIA, via OSM's Information Technology Division (ITD), provides support to the spectrum management, grants administration, and domestic and international policy development mission areas as well as, back-office administrative support. As such, the Chief, ITD also serves as the NTIA Chief Information Officer (CIO).

NTIA supports and is an active participant in the Government-wide e-Government initiatives and lines of business. Each initiative or line of business is managed by another Federal agency, such as the General Services Administration, and was implemented in part to avoid redundancy and duplication of government-wide activities. NTIA's e-government participation provides better services to citizens, promotes transparency, and actively supports our stakeholders in the business community.

NTIA will:

- Provide the IT systems required for inter-office and back-office communications in support of administrative systems;
- Provide creation and maintenance of NTIA Internet and Intranet web site pages, software, hardware, and network connectivity; and
- Develop, modify, implement, and maintain software that is necessary to operate and administer NTIA grant activities.

Under the ITD functions, NTIA will: (1) continue to maintain and update existing computer software used for processing assignments, databases, and interference calculations; (2) continue to design or implement new software packages to further improve assignment data processing and analytical engineering evaluation; (3) develop new automated systems to improve access to spectrum management information; (4) plan for upgrading the spectrum management frequency assignment and system review processes; (5) plan, upgrade and improve the computer automated software tools (e.g., Federal Spectrum Management System) provided to the Federal agencies to assist them in: (a) making more efficient and effective use of the spectrum, (b) preparing frequency assignment and spectrum certification applications, (c) developing spectrum related policies and procedures and (d) resolving interference problems; (6) prepare and implement plans to improve the efficiency and effectiveness of the Federal Government's spectrum management process using advanced IT techniques and business re-engineering; and (7) plan, upgrade and implement new methods of providing secure and non-secure access to Federal spectrum management data by NTIA staff, Federal spectrum managements, the telecommunications industry, and the general public.

NTIA will:

- Provide the IT technology systems required for inter-office communications, processing frequency assignment requests, exchanging spectrum management information with Federal agencies using the radio-frequency spectrum, and providing the public with

electronic access to spectrum management information;

- Develop and improve engineering and analysis models and tools to support spectrum engineering and analysis and the spectrum authorization processes;
- Develop, modify, and implement software that is necessary to operate the spectrum authorization processes, to provide the Federal agencies the computer automated capability to manage their frequency spectrum assets, and to provide the spectrum management community the necessary spectrum information that will enable the Federal agencies to manage their spectrum assets without interference and within the current rules and regulations;
- Develop plans to implement computer automated software tools to assist the Federal agencies in: (1) preparing their requests for frequency authorization and spectrum certification; (2) insuring that requests for spectrum are interference free and comply with NTIA's rules and regulations; (3) coordinating spectrum requests of other agencies; (4) ensuring that their use of the spectrum is efficient and effective; (5) managing their frequency assignment assets; and (6) resolving interference problems;
- Develop and implement automated workflow processes and the electronic exchange of information between the OSM and National Archives and Records Administration (NARA) for the purpose of archiving OSM Federal records; and
- Develop and implement standardized processes to ensure alignment of spectrum management systems with the Federal IT Enterprise Architecture Models, Capital Planning and Investment Control guidelines, IT security regulations, and best practices.

PROGRAM REDUCTIONS FOR FY 2013:

Spectrum Management: Federal Spectrum Management System (Base Funding: $7,560,000 and 32 FTE; Program Reduction: (-$377,000 and -0 FTE): NTIA requests a decrease of $377,000 and 0 FTE for a total of $7,183,000 and 32 FTE to support the government-wide effort to be fiscally responsible.

Proposed Actions

The Office of Spectrum Management (OSM) proposes a reduction of $377,000 in direct appropriations by reducing funding for its Federal Spectrum Management System (FSMS). This will also reduce the amount charged to Federal Agencies for spectrum management activities. This reduction will not delay development and roll out of the FSMS system. Because of the current status of the project, the program feels this reflects anticipated reductions in development costs.

FSMS remains a high priority in order to improve future capabilities for spectrum management. Therefore, NTIA recommends minimization of reductions to FSMS, where possible.

Recently, the Commerce Spectrum Management Advisory Committee has noted that the new FSMS data processes capability will need data improvements in terms of the numbers of technical fields and the accuracy of the data to maximize the value of the FSMS effort. The committee recommends that NTIA pursue this data collection and cleanup effort.

Statement of Need and Economic Benefits:

The need to reduce the Federal Government's deficit requires a reduction in Government spending. NTIA's contribution to this effort will promote operations that are more efficient. There would be no risk associated with this reduction because NTIA employees will be assuming various aspects of the development of FSMS that were previously handled by contractors.

Base Resources Assessment

OSM currently conducts the following activities with its base resources:

- Executing spectrum management functions and activities assigned to NTIA under 47 U.S.C. 902 and 903;
- Development, establishment, and implementation of plans, policies, activities, capabilities and procedures to ensure that the U.S. spectrum policy, spectrum allocations and spectrum management capabilities and processes stay up with the needs of the Federal agencies and the American public for access to the radio spectrum in the 21st century domestically and internationally;
- Ensuring Federal agencies use the radio spectrum efficiently and only occupy the spectrum as necessary to perform their missions;
- Planning for and enabling performance of Federal spectrum management functions during emergencies;

- Coordinating and registering internationally planned Federal Government satellite networks and selected assignments for terrestrial systems to work cooperatively with the Federal Communications Commission and the Federal agencies in coordinating spectrum use; and
- Developing, implementing, and maintaining the automated information technology capabilities necessary for performing these activities.

SCHEDULE AND DELIVERABLES

Schedule & Milestones:

- FY 13: Enhancement to the FSMS Functionality
- FY 13: Replacement of FMRS with New and Enhanced Back-Office Services
- FY 14: Retirement of SXXI, DCFS, GMF Card Format
- FY 14: Legacy Data Migration
- FY 14: Receive and Process Spectrum Certifications
- FY 15: Satellite Registrations
- FY 15: Enhancements to the FSMS Back-Office Functionality
- FY 15: Statistical and Analytical Reporting
- FY 15: Frequency Assignment Review Process
- FY 16: Prepare and Submit Certifications
- FY 16: Generate Allocation Plans, Channel Plans, and Frequency Schedules
- FY 16: Validate Telecommunications Service Priorities for Radiocommunications

Deliverables:

- FY 13: Enhancement to the FSMS Green Functionality
- FY 13: Replacement of FMRS with New and Enhanced Back-Office Services

PERFORMANCE METRICS

Performance Goal: Organizational Excellence **Performance Measure**: Projected lines of code created vs. required for FSMS	**FY 11 Actual**	**FY 12 Target**	**FY 13 Target**	**FY 14 Target**	**FY 15 Target**	**FY 16 Target**	**FY 17 Target**
With decrease	40.5%	50%	68%	81%	90%	99%	100%
Without decrease	40.5%	50%	69%	82%	91%	100%	100%
Description: This measure focuses on the amount of computer coding necessary to ensure FSMS' proper operation. Percentages indicate the cumulative goal during the software's life-cycle development.							

PROGRAM CHANGE PERSONNEL DETAIL

Not applicable. There will be no reduction in the number of positions.

PROGRAM CHANGE DETAIL BY OBJECT CLASS

(Dollar amounts in thousands)

Activity: Salaries and Expenses
Subactivity: Spectrum Management

Object Class	2013 Decrease
Personnel compensation	
Full-time permanent	0
Other than full-time permanent	0
Other personnel compensation	0
Special personnel services payments	0
Total personnel compensation	0
Civilian personnel benefits	0
Benefits for former personnel	0
Travel and transportation of persons	0
Transportation of things	0
Rental payments to GSA	0
Rental Payments to others	0
Communications, utilities and miscellaneous charges	0
Printing and reproduction	0
Advisory and assistance services	0
Other services	0
Purchases of goods & services from Gov't accounts	(377)
Operation and maintenance of facilities	0
Research and development contracts	0
Medical care	0
Operation and maintenance of equipment	0
Subsistence and support of persons	0
Supplies and materials	0
Equipment	0
Lands and structures	0
Investments and loans	0
Grants, subsidies and contributions	0
Insurance claims and indemnities	0
Interest and dividends	0
Refunds	0
Total obligations	(377)

PROGRAM CHANGES FOR FY 2013:

Wireless Innovation and Infrastructure Initiative (WI3) (500 MHz) (Base Funding: $0 and 0 FTE; Program Change: $1,234,000 and 5 FTE): NTIA requests $1,234,000 and 5 FTE for a total of $1,234,000 and 5 FTE to implement WI3's charge to NTIA to find over the next 10 years 500 MHz of Federal and non-Federal spectrum suitable for both mobile and fixed wireless broadband use. The spectrum must be available to be licensed by the Federal Communications Commission for exclusive use or made available for shared access by commercial and Government users to enable licensed or unlicensed wireless broadband technologies to be deployed. NTIA will analyze, identify, monitor, and report on making the 500 MHz available, develop new spectrum access approaches and technologies, and use its test bed to test devices that could promote spectrum sharing. Heretofore, NTIA has been involved with spectrum management functions and activities assigned to NTIA under 47 U.S.C. 902 and 903. Finding 500 MHz is an entirely new project for NTIA; thus, base funding is not sufficient to achieve the initiative's goals.

In accordance with the President's National Wireless Initiative, NTIA will commence work in conjunction with the FCC in recovering and reallocating spectrum, updating 20th century spectrum policies, and providing adequate incentives and assistance to enable Federal agencies or affected entities to make up to 500 MHz (in bandwidth) available. This work will also include regular progress reports. It will require in-depth review of Federal spectrum use and short- and long-term actions for accommodating mobile broadband. Some actions are likely to require analytical support and spectrum measurements. Other actions may require "domino" movement of systems from additional bands.

NTIA will develop new spectrum access approaches and technologies that will improve management of the nation's airwaves and deliver new ways for industry to provide wireless services to consumers. NTIA will apply its policy and scientific expertise to advance the Administration's spectrum sharing reform recommendations.[1] The White House, Congress, telecommunications industry, and consumers support reforms that will ensure that there is a sufficient, flexible spectrum of radio frequencies that can accommodate growing consumer demand and evolving wireless technologies, with the understanding that scarcity of mobile broadband could mean higher prices, poor service quality, and an inability for the U.S. to compete internationally**.** NTIA will address increasing the access to and efficiency of spectrum through an integrated program of research, testing, and policy development. This will be done through the combined efforts of NTIA's spectrum management and research programs.

The wireless broadband spectrum research efforts will examine the feasibility of increased spectrum sharing between Federal and non-Federal users as a means of improving spectrum efficiency. More specifically, Section 3 of the President's Memorandum calls for the following action: *"to facilitate research, development, experimentation, and testing by researchers to explore innovative spectrum-sharing technologies, including those that are secure and resilient."*[2] NTIA's research focus will expand the initial test-bed pilot program to review all promising spectrum sharing technologies and implementation approaches to ascertain if these are effective in sharing with other radio services.

[1] Presidential Determination: Memorandum for the Heads of Executive Departments and Agencies, *Improving Spectrum Management for the 21st Century*, 40 WEEKLY COMP. PRES. DOC. 2875 (Nov. 30, 2004).
[2] Presidential Memorandum for the Heads of Executive Departments and Agencies, *Unleashing the Wireless Broadband Revolution* (June 28, 2010).

This research will play a critical role in making available 500 MHz of spectrum within the next 10 years.

Proposed Actions:

NTIA will support economic growth by continuing work to identify and make available 500 MHz of spectrum as directed by the President. However, new resources are required to be dedicated solely in developing criteria for nominating candidate bands, evaluating band selection factors, determining candidate bands, determining what categories of repurposing for these candidate bands, and transitioning planning that will be required for either relocation or spectrum sharing. In addition, this work will have supporting actions regarding legislative, regulatory rulemaking, and international agreements that will be required in fulfilling the availability of spectrum. This work is expected to require the entire resources for the next ten years.

NTIA will provide opportunities for Federal agencies to work with industry, researchers, and academia to examine cooperatively new ways of sharing radio spectrum through spectrum management reforms and new technologies. In response to the executive memorandum from the President, NTIA will create and implement a plan to facilitate research, development, experimentation, and testing by researchers to explore innovative spectrum-sharing technologies. This effort will be accomplished in close consultation with NIST, the Wireless Spectrum Research & Development Technology Workgroup, National Science Foundation, and all agencies as appropriate.

NTIA, in coordination with the Federal Communications Commission (FCC) and other Federal agencies, has established a Spectrum Sharing Innovation Test-Bed (Test-Bed) pilot program to examine the feasibility of increased sharing between Federal and non-Federal users. The pilot program is currently evaluating the ability of devices employing Dynamic Spectrum Access (DSA) techniques to share spectrum with land mobile radio (LMR) systems. To fulfill the objectives being set out by the Executive Memorandum from the President, the program will expand research into spectrum-sharing technologies, such as DSA, which can be made as a part of the overall plan in making 500 MHz of spectrum available.

As part of the pilot program, NTIA engineers will develop performance monitoring tools, models, and measuring techniques that can accurately evaluate spectrum-sharing technologies and techniques. The goal of the pilot program is to develop the necessary policies and spectrum management strategies to promote the development of this potentially flexible and innovative approach to spectrum access.

Test-Bed Pilot Program: NTIA will expand and accelerate the existing Test-Bed pilot program examining DSA sharing techniques in the LMR frequency bands. The laboratory and field measurements currently planned under the pilot program were initially scheduled to be completed in April 2011. The work being performed under the pilot program has progressed more slowly than anticipated, due to the complex nature of the technologies and the difficulties experienced in tailoring the testing to each technology. Given the progress to date, in all likelihood it will take an additional three years (2014) or more to complete and document the measurements.

As directed in the Executive Memorandum, NTIA and the FCC are to work together and identify 500 MHz of spectrum for mobile broadband technologies.[3] New and innovative techniques must be employed to facilitate sharing between Federal and non-Federal users if there is any hope of

[3] Presidential Memorandum for the Heads of Executive Departments and Agencies, *Unleashing the Wireless Broadband Revolution* (June 28, 2010).

identifying 500 MHz. Adaptive sharing techniques such as DSA are envisioned as a key component to increasing access to spectrum. DSA is intended to allow each device to evaluate its radio frequency environment using spectrum sensing, geo-location, or a combination of spectrum sensing and geo-location techniques; determine which frequencies are available for use on a non-interference basis; and reconfigure itself to operate on the identified frequencies. DSA has the possibility to permit access to the spectrum without relocating the incumbent spectrum users.

Accomplishing the Administration's goals will require an expansion of staff and equipment. To date, NTIA has not conducted much research on spectrum-sharing techniques and technologies. Some of the technical actions above require original research and new analysis tools and techniques. In FY 2009, NTIA initiated the Test-Bed pilot program as a limited effort focused on existing LMR systems. Additional resources will be required to expand this effort, move the testing ahead more quickly, and to release measurement resources to perform based functions related to interference analysis and spectrum planning. The FY 2011 spectrum-access initiative using intelligent networks and cognitive radio means NTIA will expand spectrum-sharing research next year.

Statement of Need and Economic Benefits:

New resources are required to be dedicated solely in monitoring, tracking, and reporting assessment of progress toward accomplishing the actions necessary in fulfilling the goal of making available 500 MHz of spectrum. This action involves monitoring, tracking, and coordinating with over 100 Federal agencies and will require reporting to various executive offices of the President.

Few technological developments hold as much potential to enhance America's economic competitiveness, create jobs, and improve the quality of our lives as wireless high-speed access to the Internet. Innovative new mobile technologies hold the promise for a virtuous cycle -- millions of consumers gain faster access to more services at less cost, spurring innovation and then a new round of consumers benefit from new services. Expanded wireless broadband access will trigger the creation of innovative new businesses, provide cost-effective connections in rural areas, increase productivity, improve public safety, and allow for the development of mobile telemedicine, telework, distance learning, and other new applications that will transform Americans' lives.

Spectrum and the new technologies it enables also are essential to the Federal Government, which relies on spectrum for important activities, such as emergency communications, national security, law enforcement, aviation, maritime, space communications, and numerous other Federal functions. Spectrum is also critical for state, local, and tribal government functions. As the wireless broadband revolution unfolds, innovation can enable efficient and imaginative uses of spectrum to maintain and enhance the Government's capabilities. This global technology leadership will only happen if there is adequate spectrum available to support the forthcoming myriad of wireless devices, networks, and applications that can drive the new economy. To carry this out, NTIA is finding ways to use spectrum more efficiently by reviewing current uses of the Federal Spectrum, investigating innovative sharing techniques, and researching the development of advanced, situation-aware spectrum-sharing technologies.

LMR systems are used for two-way communication by Federal agencies over spectrum that is occupied infrequently throughout the day. This infrequent usage pattern allows opportunities for DSA enabled devices to access spectrum that is unused at any point in time on a non-interference basis. With the funds requested in FY 2012, NTIA will accelerate research to show that DSA can be a

viable sharing technique and a legitimate option in the ongoing effort to identify 500 MHz of spectrum that can be made available for emerging broadband technologies in order to satisfy the demand described in the National Broadband Plan and the Executive Memorandum of June 28, 2010. This effort will require additional Institute for Telecommunication Sciences (ITS) engineers to accelerate the progress of the laboratory and field measurements to characterize the behavior of DSA with incumbent systems. These measurements are critical to the acceptance of DSA as a viable sharing technique. Additional OSM engineers are needed to ensure that the data collected by ITS is sufficient to develop policy and service rules for devices using DSA sharing techniques. NTIA is currently the only Federal organization that performs the types of measurements necessary to support policy decisions on this emerging technology.

As aptly summarized by the FCC in the National Broadband Plan, "The growth of wireless broadband will be constrained if government does not make spectrum available to enable network expansion and technology upgrades. In the absence of sufficient spectrum, network providers must turn to costly alternatives, such as cell splitting, often with diminishing returns. If the U.S. does not address this situation promptly, scarcity of mobile broadband could mean higher prices, poor service quality, an inability for the United States to compete internationally, depressed demand and, ultimately, a drag on innovation … Flexibility of use enables markets in spectrum, allowing innovation and capital formation to occur with greater efficiency. More flexible spectrum rights will help ensure that spectrum moves to more productive uses, including mobile broadband, through voluntary market mechanisms. Spectrum flexibility, both for service rules and license transfers, has created enormous value. For example, the combined book value of flexible-use licenses held by the four national wireless providers, reflecting the prices paid at auction as well as in mergers and other corporate transactions, is over $150 billion. Some economists estimate that the consumer welfare gains from spectrum may be 10 times the private value to the spectrum holder. If this rule of thumb is true, it suggests that the social value of licensed mobile radio spectrum alone in the U.S. is at least $1.5 trillion." [4]

This initiative will result in a number of benefits. Non-monetary benefits include advances in spectrum science and policy, experimentation, innovation, and growth of new technologies. The monetary benefits are difficult to quantify, but the return on investment, to NTIA alone, is expected to be substantial. The Test-Bed pilot program, if properly executed, will serve as a best practices model for other similar research efforts to provide Federal agencies with more information about the performance of emerging technologies. This information can be used by Federal agencies to make sound decisions regarding whether sharing is possible through the use of DSA devices. Finally, industry and the economy overall will benefit as strengths and weaknesses of DSA sharing techniques are better understood, providing opportunities for increased spectrum access.

With the requested funding, NTIA will deliver the following:

- Measurement techniques to evaluate DSA devices. These will be made available to government, industry, and academia.
- Proposals for DSA spectrum-sharing techniques and presentation to national and international organizations.
- A plan to facilitate research, development, experimentation, and testing by researchers to explore other innovative spectrum-sharing technologies.
- Recommendations for further evaluation of spectrum-sharing technologies that have potential for the greatest near term benefits.

[4] *Connecting America: The National Broadband Plan*, pages 77-79 (March 2010).

Base Resources Assessment:

OSM's base funding is used primarily for OSM labor expenses for domestic and international spectrum management. OSM is reimbursed by other Federal agencies to execute the spectrum management functions and activities assigned to NTIA under 47 U.S.C. 902 and 903; to develop, establish, and implement plans, policies, activities, capabilities, and procedures to ensure that the U.S. spectrum policy, spectrum allocations and spectrum management capabilities and processes stay up with the needs of the Federal agencies and the American public for access to the radio spectrum in the 21st century domestically and internationally; to ensure Federal spectrum management functions during emergencies; to coordinate and register internationally planned Federal Government satellite networks and selected assignments for terrestrial systems; to work cooperatively with the Federal Communications Commission and the Federal agencies in coordinating spectrum use; and to develop, implement and maintain the automated information technology capabilities necessary for performing these activities. OSM will not collect reimbursable funds from other Federal agencies to fund the identification of 500 MHz because the effort is not intended to provide spectrum management support to those agencies. As a result, the $1.2 million for 500 MHz will be needed to address the recently signed Executive Memorandum that commits the Federal Government to make available 500 MHz available for wireless broadband. The spectrum will be identified from spectrum that may currently have Federal and/or non-Federal users. New resources are needed to identify, analyze, and reallocate spectrum and to recover current operations.

NTIA's involvement with the Test-Bed program began in the summer of 2008. NTIA provided reimbursable funds collected from other Federal agencies to evaluate the ability of DSA devices for employing spectrum sensing and/or geo-location techniques to share spectrum with land mobile radio (LMR). NTIA subsequently drafted the Phase I test plan and is presently drafting the test plans for the Phase II and III field tests. As the case above, NTIA should not collect reimbursable funds from other Federal agencies to fund a long-term research program on spectrum sharing innovation. The additional funds are required to expand the initial test-bed pilot program to review all technologies that are poised for advancement in development and commercialization. NTIA should also credibly examine all of the different DSA implementation approaches being tested to ascertain if DSA techniques are effective in sharing with other radio services. The Test-Bed program and spectrum sharing research efforts play a critical role in making available 500 MHz of spectrum within the next 10 years.

Schedule & Milestones:

- FY 2011: Develop an in depth plan and milestones for identifying 500 MHz for wireless broadband, working with the FCC and Federal agencies
- FY 2011-13: Implement the plan and milestones to review and identify bands to be made available
- FY 2012-16: Increase the spectrum available to wireless broadband services by 500 MHz within the next ten years
- FY12-13: Complete the measurements under the Test-Bed pilot program
- FY12-14: Develop and evaluate interference protection criteria, and appropriate interference models, for assessing potential interference between DSA devices and LMR systems (in coordination with appropriate Federal agencies)
- FY13 -16: Identify policies and management strategies to perform spectrum sharing

between DSA devices and LMR effectively

- FY14-16: Based on the lessons learned in the Test-Bed pilot program, develop a set of general tools and models that can be used to predict behavior and interactions of DSA spectrum-sharing techniques with other radio services

Deliverables:

Identify 500 MHz for Wireless Broadband

- FY 12 Criteria for nominating bands
- FY 12 Evaluation report on selection factors
- FY 12 Report on selection of candidate bands
- FY 12 Progress reports every 6 months
- FY 13 Recommendations for legislative action
- FY 13 Transition plans for each system to be relocated or considered for band sharing
- FY 13-15 Proposed regulatory rulemakings as required
- FY 11-14 Completion of testing and associated reports on devices being tested within the Test-Bed
- FY 12-14 Evaluation and validation of interference protection criteria of LMR services
- FY 12-14 Analysis techniques for assessing potential interference to primary systems. These will be made available to government, industry, and academia
- FY 14 Measurement techniques to evaluate DSA devices. These will be made available to government, industry, and academia
- FY 16-20 New international agreements as required

PERFORMANCE METRICS

Performance Goal: Innovation and Entrepreneurship Identify 500 MHz of available spectrum	**FY 2011 Actual**	**FY 2012 Target**	**FY 2013 Target**	**FY 2014 Target**	**FY 2015 Target**	**FY 2016 Target**	**FY 2017 Target**
With Increase	N/A	100 MHz	200 MHz	300 MHz	400 MHz	500 MHz	500 MHz
Without Increase	N/A	0	0	0	0	0	0
Description: Performance targets a cumulative total of 500 MHz required to be identified due to impact of reducing the amount of new required resources.							

Performance Goal: Innovation and Entrepreneurship Make 500 MHz of spectrum available	**FY 2011 Actual**	**FY 2012 Target**	**FY 2013 Target**	**FY 2014 Target**	**FY 2015 Target**	**FY 2016 Target**	**FY 2017 Target**
With Increase	N/A	100 MHz	200 MHz	300 MHz	400 MHz	500 MHz	500 MHz
Without Increase	N/A	0	0	0	0	0	0
Description: Performance targets a cumulative total of 500 MHz required to be made available.							

Performance Goal: Science and Information Performance Measure: Test and evaluate dynamic spectrum access devices	**FY 2011 Actual**	**FY 2012 Target**	**FY 2013 Target**	**FY 2014 Target**	**FY 2015 Target**	**FY 2016 Target**	**FY 2017 Target**
With increase	15%	25%	100%				
Without increase	15%	25%	50%	75%	100%		
Description: This measure is focused on the testing of spectrum devices and accelerating the on-going Test-Bed pilot program evaluating DSA sharing techniques to help satisfy the goal of indentifying 500 MHz for the deployment of broadband consistent with the goals established in the Executive Memorandum.							

PROGRAM CHANGE PERSONNEL DETAIL

Activity: Salaries and Expenses
Subactivity: Spectrum Management

Title:	Location	Grade	Number of Positions	Annual Salary	Total Salaries
Telecommunications Specialist	Washington, DC	GS-14	2	105,211	210,422
Electronics Engineer	Washington, DC	GS-14	1	105,211	105,211
Electronic Engineers	Boulder, CO	ZP-IV	2	129,668	259,336
Electronic Engineers	Boulder, CO	ZP-III	2	92,181	184,362
Total			7		759,331
less Lapse	25%		(2)		(189,833)
Total full-time permanent (FTE)			9		569,498
2013 Pay Adjustment	0.5%				2,847
TOTAL					572,346

Personnel Data	Number
Full-Time Equivalent Employment	
Full-time permanent	9
Other than full-time permanent	0
Total	9
Authorized Positions:	
Full-time permanent	7
Other than full-time permanent	0
Total	7

PROGRAM CHANGE DETAIL BY OBJECT CLASS

(Dollar amounts in thousands)

Activity: Salaries and Expenses
Subactivity: Spectrum Management

Object Class	2013 Increase
Personnel compensation	
Full-time permanent	$572
Other than full-time permanent	0
Other personnel compensation	0
Special personnel services payments	0
Total personnel compensation	572
Civilian personnel benefits	161
Benefits for former personnel	0
Travel and transportation of persons	47
Transportation of things	4
Rental payments to GSA	54
Rental Payments to others	0
Communications, utilities and miscellaneous charges	19
Printing and reproduction	11
Advisory and assistance services	0
Other services	100
Purchases of goods & services from Gov't accounts	80
Operation and maintenance of facilities	0
Research and development contracts	0
Medical care	0
Operation and maintenance of equipment	56
Subsistence and support of persons	0
Supplies and materials	30
Equipment	100
Lands and structures	0
Investments and loans	0
Grants, subsidies and contributions	0
Insurance claims and indemnities	0
Interest and dividends	0
Refunds	0
Total obligations	1,234

Exhibit 10

Department of Commerce
National Telecommunications and Information Administration
Salaries and Expenses
PROGRAM AND PERFORMANCE: DIRECT OBLIGATIONS
(Dollar amounts in thousands)

Activity: Salaries and expenses
Subactivity: Telecommunication sciences research

Comparison by line item		2011 Actual		2012 Enacted		2013 Base		2013 Estimate		2013 Increase/ (Decrease)	
		Personnel	Amount	Personnel	Amount	Personnel	Amount	Personnel	Amount	Personnel	Amount
Telecommunication sciences research.....	Pos/BA	49	$7,225	49	$7,071	49	$7,151	42	$5,265	(7)	($1,886)
	FTE/Obl.	44	7,240	49	$7,071	49	7,151	42	$5,265	(7)	(1,886)
Direct Obligations.....	Pos/BA	49	7,225	49	7,071	49	7,151	42	5,265	(7)	(1,886)
	FTE/Obl.	44	7,240	49	7,071	49	7,151	42	5,265	(7)	(1,886)

SUBACTIVITY: TELECOMMUNICATION SCIENCES RESEARCH

The objectives of the Telecommunication Sciences Research are to:

- Continue applied engineering and measurement work that is essential to effective NTIA and Federal Communications Commission (FCC) management of the radio frequency spectrum; the efficient implementation and electromagnetic compatibility of advanced wireless, public safety, broadcasting, and satellite communications technologies; and the development and effective use of emerging technologies, such as DSA, ultra wideband, dynamic frequency selection, digital television, land mobile radio communications, Worldwide Interoperability for Microwave Access (WiMAX), Long Term Evolution (LTE), and software-defined radio systems;

- Provide timely technical advice to support NTIA's mandate to develop and promulgate executive branch policies addressing domestic and international telecommunications and information issues. Provide support through leadership and participation in standards organizations both international and national;

- Promote timely, effective application of NTIA's research and engineering results to U.S. industry through government publications, technology transfer, and commercialization activities;

- Perform research and engineering that promote technology advancement and the efficient delivery of public services, enabling private industry, other Federal agencies, and state and local governments to meet their specific telecommunications needs in the areas of applied radio science, public safety communications, and next-generation networks (NGN);

- Organize and coordinate U.S. participation in international telecommunications conferences, standards development organizations, and negotiations in cooperation with other interested U.S. government agencies and industry groups; and

- Develop and present public interest and user-oriented technical contributions to national and international standards organizations addressing quality of service (QOS), communication network resource management, and other topics critical to the development and implementation of advanced Internet Protocol (IP)-based networks, optical transport networks, NGNs, and supporting broadband infrastructures.

Through telecommunications research and engineering, NTIA supports Administration telecommunications goals, such as enhanced domestic competition, advanced services and new technology deployment, improved foreign trade opportunities for U.S. telecommunication firms, and more efficient use of the radio frequency spectrum. These activities fall within the Department of Commerce strategic goal to promote U.S. innovation and industrial competitiveness.

NTIA, through its Institute for Telecommunications Sciences (ITS) in Boulder, CO, supports advancing telecommunications development, improving U.S. telecommunications trade opportunities, and promoting more efficient and effective use of the radio spectrum. On a reimbursable basis, NTIA's laboratory also serves as a principal Federal resource for addressing the telecommunications, IT, and security challenges of other Federal agencies, state, local, and tribal governments, and the private sector.

FY 2013 operating objectives for the Telecommunication Sciences Research activity are summarized by program area below:

Characterization of the Radio Environment: Advance the current state of knowledge, including the impact of radio frequency noise and interference on radio systems. Develop analysis techniques to describe the radio environment. The noise research component, however, will be eliminated as a result of program restructuring and efforts to reduce spending.

Radio Spectrum Measurement and Analysis: Provide the following services in support of selected spectrum management concerns: measurements of radio spectrum occupancy and usage patterns. technical support to identify and resolve and interference issues, engineering analyses to characterize the compatibility of existing and proposed new telecommunications systems, and systems engineering and radiowave propagation models to help maximize performance and efficiency of systems for interference-free sharing of bands. Several propagation studies will be discontinued in FY13 to meet program restructuring and budget deficit-reduction goals.

Propagation Model Development: Conduct radio propagation measurements and analyses for the development and validation of improved radio propagation models across the spectrum in all environments. Share these models with industry, other agencies, and national and international standard bodies. Several propagation modeling efforts will be discontinued in FY13, to address higher priorities and meet program restructuring and budget deficit-reduction goals.

Broadband Radio: Study and characterize the broadband transmission channel for within-building and campus-wide wireless local area networks and ultrawideband communications. Develop models and radio link simulators.

Interoperability of Public Safety Communication Systems: Develop standards, technologies, and test methods to ensure interoperability of land mobile radio and broadband systems used by public safety and justice communities. Develop information technology standards that public safety can adopt to ensure interoperability for information sharing.

Land Mobile Radio Service Analysis: Provide analysis to evaluate new wireless communication systems and to ensure compatible operation between systems to be used by public safety, public service, and land transportation agencies.

Domestic and International Standards: In cooperation with the U.S. International Telecommunications Union (ITU) National Committees, provide leadership of committees in ITU-T (Telecommunication Standardization Sector) and ITU-R (Radiocommunication Sector) Study Groups developing technical standards of importance to U.S. industry and Government (e.g., NGNs, switched optical networks, IP Multimedia Subsystem (IMS) and other advanced signaling systems, integrated broadband cable networks, and radar systems). Submit ITU recommendations on emerging mobile radio technologies, broadband network performance (e.g., NGN QOS), radio propagation prediction, and radar systems, and coordinate their formal review and approval. Develop and coordinate approval of related U.S. voluntary consensus standards where appropriate. ITS will discontinue its leadership role for ITU-R and reduce support for Study Group 3.

Performance Assessment: Efforts to demonstrate NTIA-developed, perception-based audio and video performance assessment tools for critical new areas including Internet multimedia conferencing, advanced television, and wireless services. Document the advances associated with these tools in open-literature publications. Perform technology transfer to Government, industrial,

academic, and individual users via NTIA-developed, easy-to-use, portable software toolkit. Multimedia research studies will be discontinued in FY13, in order to address higher priorities and meet program restructuring and deficit reduction goals.

Wireless Networks: Perform interoperability and quality assessments of representative wireless network technologies. Spearhead standards committee activities and provide engineering analysis and simulation results defining quantitative limits for adjacent and co-frequency block interference within and among advanced wireless communications technologies.

E-Government Research and Engineering: Support agencies and industry in the evaluation and development of innovative E-government tools aimed at improving government services, expanding Internet access, and promoting technology transfer opportunities.

In support of NTIA's mandate to oversee the usage of the radio spectrum by Federal agencies, NTIA maintains a comprehensive spectrum measurement capability. NTIA's Radio Spectrum Measurement Science (RSMS) program uses the most modern test equipment to measure and record signals between 10 kHz and 26 GHz. A transportable radiofrequency shielded enclosure isolates the equipment from strong external signals to ensure the integrity of the measurements. NTIA uses this system to perform spectrum occupancy and usage measurements to assist in the identification, analysis, and confirmation of candidate radio spectrum bands under consideration for spectrum sharing or reallocation. In FY 2011, the RSMS program completed development of a spectrum survey system that will be used to compare actual spectrum usage to spectrum inventory data derived from the Government Master File of frequency assignments. RSMS is also used to perform spectrum forensics to characterize and resolve interference problems encountered with government radio systems. This reduces costs to Federal agencies and preserves the integrity of critical safety of life systems. Recent examples include identification of interference to Federal radar systems from two types of commercial wireless systems. Test and measurement systems developed under the RSMS program are also used to make specialized measurements to assess the compliance of new radio equipment with frequency assignment rules and regulations. For example, the system is being used to assess the ability of existing Dynamic Frequency Selection (DFS) and proposed new DSA devices to share Unlicensed National Information Infrastructure (U-NII) and land mobile radio bands, respectively. NTIA also assists various Department of Defense agencies and Department of Commerce agencies in efficiently operating their own radio spectrum measurement programs through technical consultations, and modification, design, and construction of new radio spectrum and propagation measurement systems. This work draws on expertise developed under the RSMS program, and provides an opportunity to investigate advanced measurement methods for use in the system itself.

To accomplish these goals NTIA has established a core telecommunications research expertise that is used by both the public and private sectors. Through cooperative research and development agreements (CRADAs) with industry and reimbursable agreements with other Federal agencies, NTIA applies its expertise to some of the most important practical problems in telecommunications today. For example, both the private sector and other agencies have direct access, at cost, to on-line radio propagation models. Most other models that are available to industry and government agencies are actually based on the NTIA models and depend on NTIA maintenance. Direct-funded NTIA programs and other agency-sponsored research activities interact synergistically, generating greater total contributions to national goals, such as public safety communications interoperability, and the spectrum management role of the government, than they would individually.

As part of its mandate to oversee radio spectrum usage by Federal agencies, RSMS operates a comprehensive capability to measure spectrum use. The system can be operated in a dedicated

vehicle or as a suitcase system. NTIA performs radio measurements at selected sites and makes specialized compliance measurements that ensure compliance with government rules and regulations. NTIA measures spectrum usage, efficiency, and channel occupancy and reports the results in publications and to the Interdepartment Radio Advisory Committee (IRAC). The RSMS program also analyzes and resolves difficult and unusual interference problems where government systems are involved, saving costs to Federal agencies and the private sector. NTIA also assists Department of Defense agencies and Department of Commerce agencies in efficiently operating their own radio spectrum measurement programs through technical consultations, and modification, design, and construction of new radio spectrum and propagation measurement systems. This work draws on expertise developed for the RSMS program and provides opportunities to develop advanced measurement methods.

As new wireless technologies emerge, NTIA has strengthened its efforts to develop improved measurements to support increasingly sophisticated uses of the spectrum, including spread-spectrum, ultrawideband, and frequency-agile systems, i.e., DFS and DSA. NTIA performs spectrum-engineering analyses to assess current and future Federal use of the spectrum and determine where significant improvements in utilization appear possible. NTIA is assessing emerging spectrum requirements for public safety and law enforcement in coordination with the Public Safety Communications Research (PSCR) program, and a number of different Federal departments and programs that have a keen interest in public safety interoperability. NTIA is also evaluating the Federal Government's use of its spectrum to promote more efficient and economic spectrum use. In FY 2013, NTIA will continue to support essential spectrum utilization analyses, including the impact of new frequency-agile, software-defined DFS and DSA radio technologies. NTIA develops the measurement procedures needed to characterize these new signals and perform the increasingly complex system-compatibility analyses to assess, for example, the effects such technologies may have on incumbent systems. Technical support will be continued for major frequency management concerns through representation at technical subcommittee (TSC IRAC) meetings, with principal emphasis on improving Federal spectrum efficiency.

Global trends are moving toward providing diverse services, such as audio, video, data, broadcasting, and common carrier services through a converged system of wireline and wireless networks. Radio science has an important role in portable and mobile communications and will play an increasingly important role in connecting the end user to the information infrastructure and in providing personal communication services. Another trend is that of radio systems utilizing higher frequencies. Some radio systems are already moving into the millimeter-wave band, located at the upper end of the allocated radio spectrum (30-300 GHz).

NTIA continues to provide support to the development and deployment of various wireless technologies such as DSA technologies, which have been proposed as interference-free secondary users in Land Mobile Radio bands. Knowledge from measurements and modeling DSA technologies are crucial in determining the feasibility of interference-free, commercially viable systems. NTIA is developing models to predict the performance of radio systems operating over short paths using detailed geographic information systems (GIS).

On a reimbursable basis, NTIA provides telecommunications engineering support to improve public safety communications interoperability through the Public Safety Communications Research program on behalf of a multiagency effort that includes the National Institute for Standards and Technology (NIST), Office of Law Enforcement Standards (OLES), the Department of Homeland Security (DHS) Office for Interoperability and Compatibility (OIC), the Department of Justice (DoJ) Office of Community Oriented Policing Services (COPS), and the DHS' Office of Emergency Communications (OEC). In general, the broad based interoperability effort addresses four key areas: (1) development

of qualitative and quantitative public safety communication and information sharing requirements that are accepted nationally by the public safety community and industry; (2) identification and development of interface standards that satisfy defined user requirements through leadership and direct technical contribution to national and international standards bodies focused on public safety communications; (3) research, development, test and evaluation of concepts, products, and services for long-term interoperability solutions as well as interim improvements; and (4) research and development to accommodate technical gaps that emerge during the entire process. All elements of the NTIA public safety activity involve close and constant coordination with public safety practitioners. Recent efforts include the implementation of a broadband demonstration network to provide manufacturers a location to test and evaluate broadband technologies and systems for newly available 700 MHz spectrum.

In cooperation with U.S. industry, NTIA prepares and coordinates domestic and international telecommunications standards, develops and demonstrates technologies for assessing the performance and optimizing the utilization of public and private telecommunication networks, and evaluates emerging technologies for future needs. These activities promote international trade opportunities for U.S. telecommunication firms, enhance competition in the U.S. telecommunications industry, and improve the cost effectiveness of government telecommunications use. In its international standards work, NTIA is expanding trade opportunities for U.S. telecommunications and information providers by leading and supporting U.S. participation in key technical negotiations of the International Telecommunication Union's Telecommunication Standardization Sector (ITU-T) and Radiocommunication Sector (ITU-R). ITU telecommunication standards and radiocommunication recommendations serve as blueprints for future technology development involving billions of dollars in telecommunications industry investment worldwide. NTIA staff engages in ITU negotiations and provide the technical content for international standards and recommendations. U.S. industry and U.S. government agencies depend heavily on NTIA to provide both technical information and negotiators in ITU-T and ITU-R.

To support fundamental research into the nature, interaction, and evaluation of telecommunication devices, systems, and services NTIA manages the Table Mountain Field Site and Radio Quiet Zone. This is a 1,800-acre, open-air test location protected from strong external radio signals by both Federal and State laws. This site is used for performing sensitive radio or electromagnetic experiments, as well as for applications needing low vibration and unobstructed views of the sky. Recent activities include exploratory field tests of DSA radio systems and controlled measurements of low-to-ground radiowave propagation to validate models for use in mitigating and jamming improvised explosive devices (IEDs). The results of the Table Mountain work benefit the government and industry via reports, technical papers, journal articles, conference papers, web documents, and computer programs.

NTIA’s international and U.S. standards committee leadership is supported by telecommunications research and engineering activities that develop and implement performance measures for integrated data, audio (including voice), video, and multimedia communication equipment and services. NTIA applies its unique expertise and state-of-the-art voice and video measurement laboratories to validate and optimize telecommunication performance standards. This research leads U.S. Industry and the world in the development of user-oriented, technology-independent performance parameters and measurement methods for high-speed data communication services. In FY 2013, NTIA will continue its groundbreaking work in perception-based audio and video quality assessment and associated digital compression and transmission issues. NTIA is focusing its work toward important new technology areas including advanced television (e.g., Internet Protocol Television (IPTV)) services. Both of these fundamentally new areas pose significant and novel coding, transmission, and quality assessment challenges. NTIA is also conducting research on coding and transmission quality for

wireless and broadband access services. NTIA is pursuing in-service quality assessment techniques, since these allow for the most relevant assessments and do not require the interruption of services. NTIA, however, will no longer continue research into assessment methods for multi-media quality assessment technologies, due to budget reductions.

Under agency reimbursable agreements, NTIA supports other Federal agencies with telecommunication challenges and problems. This work includes the development of telecommunication specifications, standards, proof of concept and demonstration measurements, interoperability analyses, and technical and economic impact assessments, and prototype development. FY 2013 reimbursable programs will address public safety communications interoperability, digital land mobile radio standards development, network reliability and restoration, and priority access capabilities for public wireless and IP-based networks. In Public Safety work, for example, NTIA advances the work of other Federal Programs (e.g., NIST/OLES, DHS/OIC, etc.) through leadership and critical technical contributions to the Third Generation Partnership Project (3GPP) for public safety broadband and the Project 25 Technical Committees, Working Groups, and Task Groups, as well as the associated organizational entities within the Telecommunications Industry Association (TIA) TR-8 Committees for public safety narrowband communications. NTIA is also supporting the National Archives and Records Administration (NARA) in an effort to expand a prototype system that has potential for storing up to 100 Terabytes of temporary electronic records.

NTIA will continue its on-going wireless networking program in FY 2013. Advanced wireless technologies are expected to provide wireless voice, data, and image communications and a variety of advanced service features using small, inexpensive, lightweight, low-powered portable radio terminals. Advanced wireless technologies will extend wired information infrastructures to mobile, rural, and other users and may dramatically improve telecommunication service availability in natural disaster and other emergency situations. However, achieving these benefits will require solutions to major implementation problems. As wireless networks and applications expand, interference among users sharing spectrum is likely. Users and service providers hoping to develop advanced wireless networks may be faced with an over-abundance of candidate technologies, many of which are non-interoperable. NTIA is addressing these problems by providing objective, expert technical contributions in support of public interest concerns in national and international committees responsible for resolving wireless network implementation issues. A particular focus of NTIA activity is in the development of intra-system and inter-system interference assessment metrics and standards in the Alliance for Telecommunications Industry Solutions (ATIS) subcommittee WTSC/G3GRA (Wireless Technologies and Systems Committee — Radio Aspects of GSM/3G and Beyond) to enhance capability and harmonization among telecommunication systems in the environment. Results promote efficient use of increasingly scarce radio spectrum and improve wireless system coverage and performance.

PROGRAM REDUCTION FOR FY 2013:

Telecommunication Sciences Research: Phase-out of Multi-Media Quality Research, Propagation and Noise Measurements/Modeling, and Policy Support Special Studies (Base Funding: $7,151,000 and 49 FTE; Program Reduction: -$1,886,000 and -7 FTE): NTIA requests a decrease of $1,886,000 and 7 FTE to support higher priorities.

Proposed Actions:

In an effort to reduce Government spending, NTIA will restructure its research program and laboratory core capabilities around projects that yield the highest benefits and advance National goals in the areas of broadband deployment, spectrum management, public safety, and technology innovation. Less significant program elements will be phased out, including: multimedia quality research, projects focused on radio propagation, noise measurement methods and modeling studies, and policy support special studies. While these program elements are important, and their impact will be felt, a shift in research emphasis and resources is necessary to balance future research needs and budget reduction goals.

In order to fund higher priority programs in FY 2013, NTIA is in the process of downsizing the Institute for Telecommunication Sciences (ITS), in Boulder, CO, through normal attrition, buy-outs, and other voluntary incentive programs. Additionally, ITS will be pursuing reimbursable opportunities and plans to grow some program areas, such as public safety, that directly support and benefit other Federal agencies. High priority base research capabilities will continue to function without disruption, especially spectrum measurements and propagation support for the Office of Spectrum Measurement, Audio and Video Quality research in support of industry, Domestic and International Standards Development, and Table Mountain Field Site Modernization and Maintenance.

Statement of Need and Economic Benefits:

NTIA's Institute for Telecommunication Sciences is the only Federal telecommunications laboratory capable of providing NTIA, Federal agencies, and the telecommunications industry with impartial and technically sound measurement data and propagation models. These efforts contribute to the science-related goals of the Department of Commerce and the National Broadband Plan. NTIA's research directly benefits the telecommunications industry, which plays an important role in the U.S. and world economy.

Base Resources Assessment

NTIA's Institute for Telecommunication Sciences (ITS) performs state-of-the-art telecommunications research and engineering to further the knowledge of the radio frequency spectrum and to improve wireless telecommunications system planning, design, and evaluation. Below is a brief summary of the ITS research programs and activities:

Audio and Video Performance Assessment: Research on digital audio and video quality, grounded in signal processing theory and models of perception. Multimedia quality assessment studies will be discontinued in FY13 to meet laboratory restructuring and spending reduction goals.

Broadband and Wireless Communications Research: Research to explore and evaluate advances in broadband and wireless communication systems and how these systems can be used in national security/emergency preparedness, military, and commercial environments. This includes developing methods, propagation models, and tools for testing emerging broadband network and advanced antenna technologies. Several studies will be discontinued in FY13 to meet laboratory restructuring and spending reduction goals.

Domestic and International Standards: In cooperation with the U.S. International Telecommunication Union (ITU) National Committees, ITS supports the U.S. administration on committees in the Telecommunication Standardization Sector (ITU-T) and Radiocommunication Sector (ITU-R Study Groups. The goal of this effort is to develop technical standards of importance to U.S. industry and Government. For over thirty years, ITS has provided continuous leadership and technical support to the U.S. Administration on the ITU-T and ITU-R committees. ITS personnel currently serve as head of US/International Delegations on both ITU committees and participate on technical working groups. Budget reductions in FY 2013 will not eliminate ITS' participation on these committees; however, ITS will reduce staff participation on the study groups and will not fulfill the Vice-Chair role of ITU-R Study Group 3 for the US delegation.

Spectrum Measurements: ITS measures emission characteristics of Federal and non-government transmitter systems and identifies and resolves radio frequency interference. This enables NTIA and the FCC to manage effectively the radio frequency spectrum, implement advanced wireless solutions, and resolve management problems and interference issues involving Government systems.

Table Mountain Research and Modernization: The Table Mountain Field Site and Radio Quiet Zone supports fundamental research into the nature, interaction, and evaluation of telecommunications devices, systems, and services. Several research studies will be discontinued; e.g., near-earth wave propagation studies, research related to radio wave polarization measurements, and use of software defined radio for spectrum monitoring at the Table Mountain Field Site in FY 2013 to meet program restructuring and spending reduction goals.

Schedule & Milestones: The following milestones will not be completed due to budget reductions:

- FY 12/13: Develop assessment methods for multi-media signals, as delivered over cable, Internet, and wireless channels
- FY 13: Develop assessment methods for 3-DTV applications.
- FY12/13: Measurement methods to characterize field conditions and soil types for detecting improvised explosive devices (Referenced in ITS' 2010 annual report.)
- FY12/13: Short-range radio propagation modeling for frequencies from 162 Mhz to 6 GHz
- FY 12/13: Propagation models for new broadband technologies (CDMA2000, LTE, and WiMax)
- FY12/13: Outdoor and indoor methods for measuring environmental noise
- FY 12/13: Two technical studies in support of quick response policy-related requests

Deliverables: The following deliverables will not be completed due to budget reductions:

- FY 12/13: Contributions and reports to the International Telecommunications Union study

groups on audiovisual quality assessment methods for multimedia applications

- FY13: Contributions and reports to ITU-R and Study Group 3 on next generation mobile and aeronautical service standards
- FY 13: Report on quality assessment methods for 3-DTV technology
- FY 13: Proposed ITU standard on 3-DTV audio-video quality assessment methods
- FY13: Report series on best methods for collecting measurement data for propagation models with potential application in detecting and jamming improvised explosive devices
- FY13: Two reports with comprehensive set of noise measurement methods for both outdoor and indoor environments
- FY13: Report and on-line application associated with short-range propagation models and data for frequencies from 162 Mhz to 6 GHz
- FY13: Tools to model co-channel interference for new broadband technologies, e.g., CDMA200, LTE, and WiMax
- FY13: Software Defined Radio based test instrument for broadband technologies

PERFORMANCE METRICS

Performance Goal: Science and Information **Performance Measure:** Measurement Methods and Propagation Models and Tools for Broadband deployment, Spectrum Sharing, and DoD Applications • Multi-media assessment methods • Broadband technology propagation models • Noise measurement methods • Short-range propagations models • Measurement methods for detecting improvised explosive devices • Methods for measuring environment noise for outdoor and indoor applications • Contributions to ITU-R and Study Group 3 on next generation mobile service standards • Software Defined Radio based test instrument for broadband technologies	FY 11 Actual	FY 12 Target	FY 13 Target	FY 14 Target	FY 15 Target	FY 16 Target	FY 17 Target
With decrease	6	7	0	0	0	0	0
Without decrease	6	7	6	0	0	0	0
Description: The above measurement methods and propagation models were planned to be completed in FY 2013. Instead, ITS will focus refocus research to those areas that yield high benefits to spectrum managers and the public.							

PROGRAM CHANGE PERSONNEL DETAIL

Activity: Salaries and Expenses
Subactivity: Telecommunications Sciences Research

Title:	Location	Grade	Number of Positions	Annual Salary	Total Salaries
Electronic Engineer	Boulder, CO	ZP-IV	(1)	134,899	(134,899)
Electronic Engineer	Boulder, CO	ZP-IV	(6)	129,668	(778,008)
Total			(7)		(912,907)
less Lapse		0%	0		0
Total full-time permanent (FTE)			(7)		(912,907)
2012 Pay Adjustment (0%)					0
2013 Pay Adjustment (0.5%)					0
TOTAL					(912,907)

Personnel Data	Number
Full-Time Equivalent Employment	
Full-time permanent	(7)
Other than full-time permanent	0
Total	(7)
Authorized Positions:	
Full-time permanent	(7)
Other than full-time permanent	0
Total	(7)

PROGRAM CHANGE DETAIL BY OBJECT CLASS

(Dollar amounts in thousands)

Activity: Salaries and Expenses
Subactivity: Telecommunications Sciences Research

	Object Class	2013 Decrease
11	Personnel compensation	
11.1	Full-time permanent	($913)
11.3	Other than full-time permanent	0
11.5	Other personnel compensation	0
11.8	Special personnel services payments	0
11.9	Total personnel compensation	(913)
12	Civilian personnel benefits	(258)
13	Benefits for former personnel	0
21	Travel and transportation of persons	(20)
22	Transportation of things	0
23.1	Rental payments to GSA	(33)
23.2	Rental Payments to others	0
23.3	Communications, utilities and miscellaneous charges	(4)
24	Printing and reproduction	(2)
25.1	Advisory and assistance services	0
25.2	Other services	(32)
25.3	Purchases of goods & services from Gov't accounts	(361)
25.4	Operation and maintenance of facilities	0
25.5	Research and development contracts	0
25.6	Medical care	0
25.7	Operation and maintenance of equipment	(2)
25.8	Subsistence and support of persons	0
26	Supplies and materials	(67)
31	Equipment	(194)
32	Lands and structures	0
33	Investments and loans	0
41	Grants, subsidies and contributions	0
42	Insurance claims and indemnities	0
43	Interest and dividends	0
44	Refunds	0
99	Total obligations	(1,886)

Exhibit 10

Department of Commerce
National Telecommunications and Information Administration
Salaries and Expenses
PROGRAM AND PERFORMANCE: DIRECT OBLIGATIONS
(Dollar amounts in thousands)

Activity: Salaries and expenses
Subactivity: Broadband Programs

Comparison by line item		2011 Actual		2012 Enacted		2013 Base		2013 Estimate		2013 Increase/ (Decrease)	
		Personnel	Amount	Personnel	Amount	Personnel	Amount	Personnel	Amount	Personnel	Amount
Broadband Programs……	Pos/BA	50	$19,834	40	$25,646	40	$25,898	36	$26,894	(4)	$996
	FTE/Obl.	45	21,796	40	25,682	40	25,898	36	26,894	(4)	996
Direct Obligations.....	Pos/BA	50	19,834	40	25,646	40	25,898	36	26,894	(4)	996
	FTE/Obl.	45	21,796	40	25,682	40	25,898	36	26,894	(4)	996

SUBACTIVITY: BROADBAND PROGRAMS

The objectives of the Broadband Program subactivity are to:

- Oversee nearly $4.2 billion in awarded grants funded through the Broadband Technology Opportunities Program and the State Broadband Data and Development Program to prevent waste, fraud, and abuse by grant recipients and to protect the Federal Government's investment in broadband infrastructure and services;
- Provide assistance to grant recipients in carrying out their projects;
- Ensure the timely distribution of Recovery Act funds to create and maintain jobs;
- Demonstrate transparency and accountability of program activities and recovery act funds by ensuring the public availability of recipient reporting and other program information; and
- Update and maintain a comprehensive nationwide inventory map of existing broadband service capability and availability.

Broadband Programs: www.ntia.doc.gov/broadbandgrants

The American Recovery and Reinvestment Act of 2009 (Recovery Act, Public Law No. 111-5) appropriated $4.7 billion to NTIA to provide grants for broadband initiatives throughout the United States. The Recovery Act instructed NTIA to establish the Broadband Technology Opportunities Program (BTOP), a grant program providing access to broadband in unserved areas of the United States; improving access in underserved areas; providing broadband technologies to schools, hospitals, libraries and other strategic institutions; improving broadband capabilities for public safety agencies; and stimulating demand for broadband.

In addition to fostering greater availability and use of broadband technologies, BTOP is helping to jump-start economic growth, create jobs, and lay the foundation for long-term prosperity for all Americans. The goal of this program is to improve broadband services in areas of the United States not adequately served, ensure that every American may benefit from broadband technologies, and enhance America's competitiveness through advances in broadband speeds, deployment, and adoption.

The Recovery Act also required NTIA to establish the State Broadband Data and Development (SBDD) Program and to develop and maintain a map of broadband services in the United States. The SBDD Program provided grants to U.S. States and Territories for projects that collect comprehensive and accurate State-level broadband mapping data, develop State-level broadband maps, and fund statewide initiatives that plan for and improve the availability of broadband. The nationwide broadband inventory map became available in February 2011, and the broadband inventory map is being updated and maintained by NTIA per the requirements of the Broadband Data Improvement Act, P.L. 100-385.

All BTOP and SBDD grants were obligated by the end of Fiscal Year 2010. Among other things, NTIA must ensure that the BTOP projects supported by these funds are substantially completed within two years and that funds are used by recipients in an efficient, expeditious, and competent manner. Effective oversight of the grants is critical to mitigate the risk of waste, fraud, and abuse of nearly $4.2 billion in awarded broadband grants.

PROGRAM INCREASE FOR FY 2013:

Broadband Programs (Base Funding: $25,898,000 and 40 FTE; Program Change: (+$996,000 and -4 FTE): NTIA requests an increase of $996,000 and a reduction of 4 FTE for a total of $26,894,000 and 36 FTE to prevent waste, fraud, and abuse in nearly $4.2 billion in awarded broadband grants. The American Recovery and Reinvestment Act of 2009 (Recovery Act, Public Law No. 111-5) appropriated $4.7 billion to NTIA to provide grants for broadband initiatives throughout the United States. Although those funds expired in FY 2010, the grants still are open and require oversight to protect the Federal Government's investment in broadband infrastructure, public computer centers, and broadband adoption projects.

Proposed Action:

The base funding for the program does not provide sufficient funds to continue with critical contract services that assist NTIA with grants administration that is required to protect the Federal Government's investment in broadband infrastructure, public computer centers, broadband adoption, and state broadband data and development projects.

NTIA is using FY 2012 appropriations to extend a critical program support contract into FY 2013. NTIA will use the increase and the savings from the reduced FTEs to ensure that those contract resources remain level through FY 2013. The contract resources are necessary to ensure that NTIA conducts adequate grants oversight and technical assistance for recipients as their projects near completion. The contract support also will be help fill resource gaps as NTIA expects Federal staff attrition under the limited remaining term of these programs.

Statement of Need and Economic Benefits:

Without the funding, NTIA will experience a gap in oversight necessary to mitigate the risk of waste, fraud, and abuse of public funds. This will occur at a critical time in which NTIA is working with recipients to close their grants and ensure that recipients properly account for the Federal funds spend under the grants.

Total anticipated administrative expenses – which include this initiative, ARRA administrative expenses, base resources, and out year plans – represent less than 5 percent of the funds for the program. Based on NTIA's experience, competitive Federal grant programs require approximately 10% of an appropriation to manage grants from application to closeout. For example, NTIA's Public Telecommunications Facilities Program regularly received 10 percent of its appropriation for administrative costs. With over $4 billion in awarded broadband grants at risk of potential waste, fraud, and abuse, this is a prudent investment to protect taxpayer funds.

Base Resource Assessment:

The FY 2012 Broadband Programs subactivity is funded at $25,646,000. The adjusted base of $26,108,000 for FY 2012 will be used to fund basic grants oversight but falls short of the funds required to effectively oversee and assist the broadband grant recipients through the entire fiscal year. The additional funding of $996,000 will ensure that NTIA can continue with contract services through the end of FY 2013. The FTEs for this subactivity will be scaled down from 40 in FY 2012 to

36 in FY 2013 as NTIA expects Federal staff attrition due to the limited remaining term of these programs.

Schedule & Milestones:

- 9/30/2012: Projects Substantially (67%) Complete
- 9/30/2013: Projects 90% Complete
- 9/30/2014: All Projects Complete, Program Closed, Final Program Evaluation

Deliverables:

- Annual Program Assessments
- Quarterly Program Reports to Congress

PERFORMANCE METRICS

Performance Goal: Innovation and Entrepreneurship Project Completion Rate	**FY 2011 Actual**	**FY 2012 Target**	**FY 2013 Target**	**FY 2014 Target**
With Increase	20%	67%	90%	100%
Without Increase	20%	67%	75%	100%

Description: This performance measure focuses on the infrastructure, public computing center, and sustainable broadband adoption recipients' ability to timely complete the projects based on the oversight, guidance, and assistance provided by the Federal program office.

* Note that these measures do not include the State Broadband Data and Development grants, which have a longer period of performance.

PROGRAM CHANGE PERSONNEL DETAIL

Activity: Salaries and Expenses
Subactivity: Broadband Programs

Title:	Location	Grade	Number of Positions	Annual Salary	Total Salaries
Management and Program Analyst	Washington, DC	GS-12	(2)	74,872	(149,744)
Grants Specialist	Washington, DC	GS-12	(1)	74,872	(74,872)
Secretary	Washington, DC	GS-9	(1)	51,630	(51,630)
Total			(4)		(276,246)
less Lapse		0%	0		0
Total full-time permanent (FTE)			(4)		(276,246)
2012 Pay Adjustment (0%)					0
2013 Pay Adjustment (0.5%)					0
TOTAL					(276,246)

Personnel Data	Number
Full-Time Equivalent Employment	
Full-time permanent	(4)
Other than full-time permanent	0
Total	(4)
Authorized Positions:	
Full-time permanent	(4)
Other than full-time permanent	0
Total	(4)

PROGRAM CHANGE DETAIL BY OBJECT CLASS

(Dollar amounts in thousands)

Activity: Salaries and Expenses
Subactivity: Broadband Programs

	Object Class	2013 Change
11	Personnel compensation	
11.1	Full-time permanent	(276)
11.3	Other than full-time permanent	0
11.5	Other personnel compensation	0
11.8	Special personnel services payments	0
11.9	Total personnel compensation	(276)
12	Civilian personnel benefits	(76)
13	Benefits for former personnel	0
21	Travel and transportation of persons	0
22	Transportation of things	0
23.1	Rental payments to GSA	0
23.2	Rental Payments to others	0
23.3	Communications, utilities and miscellaneous charges	0
24	Printing and reproduction	0
25.1	Advisory and assistance services	0
25.2	Other services	0
25.3	Purchases of goods & services from Gov't accounts	1,348
25.4	Operation and maintenance of facilities	0
25.5	Research and development contracts	0
25.6	Medical care	0
25.7	Operation and maintenance of equipment	0
25.8	Subsistence and support of persons	0
26	Supplies and materials	0
31	Equipment	0
32	Lands and structures	0
33	Investments and loans	0
41	Grants, subsidies and contributions	0
42	Insurance claims and indemnities	0
43	Interest and dividends	0
44	Refunds	0
99	Total obligations	996

Department of Commerce
National Telecommunications and Information Administration
Salaries and Expenses
DETAILED REQUIREMENTS BY OBJECT CLASS
(Dollar amounts in thousands)

		2011 Actual	2012 Enacted	2013 Base	2013 Estimate	2013 Increase/ (Decrease)
11	Personnel compensation					
11.1	Full-time permanent	$15,223	$16,428	$16,502	$16,401	($101)
11.3	Other than full-time permanent	244	260	260	260	0
11.5	Other personnel compensation	0	20	20	20	0
11.8	Special personnel services payments	0	0	0	0	0
11.9	**Total personnel compensation**	15,467	16,708	16,782	16,681	(101)
12.1	Civilian personnel benefits	4,386	3,617	3,740	3,714	(26)
13	Benefits for former personnel	0	0	0	0	0
21	Travel and transportation of persons	763	716	737	826	89
22	Transportation of things	10	40	41	47	6
23.1	Rental payments to GSA	1,031	1,901	1,933	1,991	58
23.2	Rental payments to others	0	0	0	0	0
23.3	Communications, utilities and miscellaneous charges	158	257	91	119	28
24	Printing and reproduction	58	87	88	109	21
25.1	Advisory and assistance services	1,030	410	410	410	0
25.2	Other services	1,044	1,595	1,904	1,992	88
25.3	Purchases of goods and services from Government accounts	17,906	21,679	19,729	20,523	794
25.7	Operation and maintenance of equipment	115	124	124	187	63
26	Supplies and materials	240	155	157	124	(33)
31	Equipment	658	287	291	202	(89)
41	Grants, subsidies and contributions	0	0	0	0	0
99	**TOTAL OBLIGATIONS**	$42,866	$47,576	$46,027	$46,925	$898
	Prior Year Recoveries/Refunds	($53)				
	Unobligated balances from Prior Years	(2,264)	(2,008)			
	Unobligated balance EOY	2,008	0			
	Unobligated balance, expiring	10	0			
	Transfer from other accounts	(1,999)	0			
	Total Budget Authority	$40,568	$45,568	$46,027	$46,925	$898

Department of Commerce
National Telecommunications and Information Administration
Salaries and Expenses
DETAILED REQUIREMENTS BY OBJECT CLASS
(Dollar amounts in thousands)

Personnel Data	2011 Actual	2012 Enacted	2013 Base	2013 Estimate	2013 Increase/ (Decrease)
Full-Time Equivalent Employment:					
Full-time permanent	137	147	147	146	(1)
Other than full-time permanent	0	0	0	0	0
Total	137	147	147	146	(1)
Authorized Positions:					
Full-time permanent	157	147	147	150	3
Other than full-time permanent	0	0	0	0	0
Total	157	147	147	150	3

Department of Commerce
National Telecommunications and Information Administration
Salaries and Expenses
APPROPRIATIONS LANGUAGE AND CODE CITATIONS

For necessary expenses, as provided for by law, of the National Telecommunications and Information Administration (NTIA), [$45,568,000] $46,925,000, to remain available until September 30, [2013] 2014: Provided, That notwithstanding 31 U.S.C. 1535(d), the Secretary of Commerce shall charge Federal agencies for costs incurred in spectrum management, analysis and operations, and related services and such fees shall be retained and used as offsetting collections for costs of such spectrum services, to remain available until expended: Provided further, That the Secretary of Commerce is authorized to retain and use as offsetting collections all funds transferred, or previously transferred, from other Government agencies for all costs incurred in telecommunications research, engineering, and related activities by the Institute for Telecommunication Sciences of NTIA, in furtherance of its assigned functions under this paragraph, and such funds received from other Government agencies shall remain available until expended.

15 U.S.C. § 1512
15 U.S.C. § 1532
47 U.S.C. § 305
47 U.S.C. § 606
47 U.S.C. § 901, et seq.
47 U.S.C. § 1304
47 U.S.C. § 1305

15 U.S.C. § 1512 authorizes the Secretary of Commerce to foster, promote and develop foreign and domestic commerce.

15 U.S.C. § 1532 authorizes the Secretary of Commerce to conduct research and analysis in all telecommunications sciences; to investigate the transmission of radio waves and electromagnetic radiation; and to compile, evaluate, publish, and distribute related information.

47 U.S.C. § 305 authorizes the President to assign frequencies to radio stations or classes of radio stations belonging to and operated by the United States. Originally delegated to the Department of Commerce by Executive Order 12046, as later codified in the National Telecommunications and Information Administration Organization Act, 47 U.S.C. § 901, et seq.

47 U.S.C. § 606 and associated Executive Orders authorize the President to perform certain telecommunications emergency functions essential to security and the national defense.

47 U.S.C. § 901, et seq. authorizes NTIA to perform the Secretary's communications and information functions.

47 U.S.C. § 1304 authorizes the Secretary of Commerce to establish and administer a grant program for the development and implementation of statewide initiatives to identify and track the availability and adoption of broadband services within each State.

47 U.S.C. § 1305 authorizes the Assistant Secretary of Commerce for Communications and Information to establish and administer a national broadband service development and expansion grant program and to develop and maintain a comprehensive nationwide inventory map of existing broadband service capability and availability in the United States.

Department of Commerce
National Telecommunications and Information Administration
Salaries and Expenses
ADVISORY AND ASSISTANCE SERVICES

	2011 Actual	2012 Estimate	2013 Estimate
Management and Professional Support Services	$107	$110	$110
Studies, Analysis & Evaluations	0	0	0
Engineering & Technical Services	923	300	300
Total	$1,030	$410	$410

NTIA utilizes consultants throughout its programs to provide scientific or technical expertise in specialized areas.

Department of Commerce
National Telecommunications and Information Administration
Salaries and Expenses
PERIODICALS, PAMPHLETS AND AUDIOVISUAL PRODUCTS

	2011 Actual	2012 Estimate	2013 Estimate
Periodicals	$0	$0	$0
Pamphlets	42	20	20
Audiovisual Products	0	0	0
Total	$42	$20	$20

NTIA utilizes pamphlets to provide an overview of NTIA programs and services to the public.

Department of Commerce
National Telecommunications and Information Administration
Salaries and Expenses
AVERAGE GRADE AND SALARIES

	2011 Actual	2012 Estimate	2013 Estimate
Direct:			
Average ES Salary	$167,292	$167,292	$170,638
Average Career Path Salary	111,117	$111,117	$111,117
Average GS Grade	13.6	13.7	13.7
Average GS Salary	$105,725	$105,725	$107,840

Department of Commerce
National Telecommunications and Information Administration
Salaries and Expenses
SUMMARY OF RESOURCE REQUIREMENTS
(Dollar amounts in thousands)

	Positions	FTE	Budget Authority	Direct Obligations
FY 2012 Enacted	0	0	0	0
less: Obligations from prior years	0	0	0	0
plus: 2013 adjustments to base	0	0	0	0
2013 Base	0	0	0	0
plus: 2013 program changes	7	5	50,000	25,000
2013 Estimate	7	5	50,000	25,000

Comparison by activity/subactivity		2011 Actual		2012 Enacted		2013 Base		2013 Estimate		2013 Increase/ (Decrease)	
		Personnel	Amount	Personnel	Amount	Personnel	Amount	Personnel	Amount	Personnel	Amount
Public Safety Broadband Corporation	Pos/BA	0	$0	0	$0	0	$0	7	$50,000	7	50,000
	FTE/Obl.	0	0	0	0	0	0	5	25,000	5	25,000
TOTALS	Pos/BA	0	0	0	0	0	0	7	50,000	7	50,000
	FTE/Obl.	0	0	0	0	0	0	5	25,000	5	25,000
Adjustments to Obligations:											
Recoveries/Refunds			0		0		0		0		0
Unobligated Balance, start of year			0		0		0		0		0
Unobligated Balance, end of year			0		0		0		0		0
Unobligated Balance expiring			0		0		0		0		0
Financing from transfers:											
Transfer from other accounts (-)			0		0		0		0		0
Transfer to other accounts (+)			0		0		0		0		0
Mandatory Appropriation			0		0		0		50,000		50,000

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Exhibit 10

Department of Commerce
National Telecommunications and Information Administration
Salaries and Expenses
PROGRAM AND PERFORMANCE: DIRECT OBLIGATIONS
(Dollar amounts in thousands)

Activity: Salaries and expenses
Subactivity: Public Safety Broadband Network

Comparison by line item		2011 Actual		2012 Enacted		2013 Base		2013 Estimate		2013 Increase/ (Decrease)	
		Personnel	Amount	Personnel	Amount	Personnel	Amount	Personnel	Amount	Personnel	Amount
Public Safety Broadband Corporation.....	Pos/BA	0	$0	0	$0	0	$0	7	$50,000	7	$50,000
	FTE/Obl.	0	0	0	0	0	0	5	25,000	5	25,000
Direct Obligations.....	Pos/BA	0	0	0	0	0	0	7	50,000	7	50,000
	FTE/Obl.	0	0	0	0	0	0	5	25,000	5	25,000

APPROPRIATION ACCOUNT: SALARIES AND EXPENSES

BUDGET ACTIVITY: PUBLIC SAFETY BROADBAND NETWORK

In support of the President's National Wireless Initiative in the American Jobs Act, the budget proposes to establish a program to develop a nationwide interoperable public safety broadband network in the 700 MHz band. NTIA requests $7,000,000,000 in mandatory funding over the next 10 years to build a public safety broadband network. NTIA's request for FY 2013 is $50,000,000 to begin to establish the Public Safety Corporation with State, Local, and Federal representation. The Administration will propose legislation to implement this program.

SUBACTIVITY: PUBLIC SAFETY BROADBAND CORPORATION

The objectives of the Public Safety Broadband Network are to:

- build a nationwide communication network that permits interoperability of public safety equipment;
- efficiently use spectrum dedicated to public safety; and
- ensure accountability through Federal monitoring and oversight of funded entities.

PROGRAM CHANGES:

Public Safety Broadband Corporation: For FY 2013 $50,000,000 and 5 FTE would be required for implementation. The program would begin in FY 2013, and would be administered over several years.

The proposed American Jobs Act included the establishment of a private, non-profit corporation, the Public Safety Broadband Corporation. NTIA would transfer resources to the Corporation for administrative expenses during the start-up phase. The total cost would be $50 million.

With the authority to collect fees and issue bonds or notes, the intention is for the Corporation eventually to be self-funded and reinvest in the nationwide public safety interoperable network.

Base Resource Assessment:

There is no base funding because this is a new program.

End Goals

- Establish the Public Safety Broadband Corporation with State, Local and Federal representation to oversee the building, deployment, and operation of a secure, resilient, and interoperable public safety broadband network
- Enhance public safety communications capability, including voice and broadband transmission
- Maximize network's efficient use of spectrum
- Leverage commercial wireless broadband infrastructure

PROGRAM CHANGE PERSONNEL DETAIL

Activity: Salaries and Expenses
Subactivity: Public Safety Broadband Corporation

Title:	Location	Grade	Number of Positions	Annual Salary	Total Salaries
Deputy Associate Administrator	Washington, DC	SES-IV	1	155,500	155,500
Communications Program Specialist	Washington, DC	GS-15	1	123,758	123,758
Management and Program Analyst	Washington, DC	GS-15	1	123,758	123,758
Communications Program Specialist	Washington, DC	GS-14	3	105,211	315,633
Management and Program Analyst	Washington, DC	GS-13	1	89,033	89,033
Subtotal			7		807,682
Less lapse		25%	(2)		(201,921)
Total full-time permanent (FTE)			5		605,672
2012 Pay Adjustment (0%)					0
2013 Pay Adjustment (0.5%)					3,029
TOTAL					608,701

Personnel Data	Number
Full-Time Equivalent Employment:	
Full-time permanent	5
Other than full time permanent	0
Total	5
Authorized Positions:	
Full-time permanent	7
Other than full-time permanent	0
Total	7

PROGRAM CHANGE DETAIL BY OBJECT CLASS

(Dollar amounts in thousands)

Activity: Salaries and Expenses
Subactivity: Public Safety Broadband Corporation

	Object Class	2013 Increase
11	Personnel compensation	
11.1	Full-time permanent	608
11.3	Other than full-time permanent	0
11.5	Other personnel compensation	0
11.8	Special personnel services payments	0
11.9	Total personnel compensation	608
12	Civilian personnel benefits	171
13	Benefits for former personnel	0
21	Travel and transportation of persons	1
22	Transportation of things	0
23.1	Rental payments to GSA	35
23.2	Rental Payments to others	0
23.3	Communications, utilities and miscellaneous charges	12
24	Printing and reproduction	2
25.1	Advisory and assistance services	0
25.2	Other services	0
25.3	Purchases of goods & services from Gov't accounts	1,129
25.4	Operation and maintenance of facilities	0
25.5	Research and development contracts	0
25.6	Medical care	0
25.7	Operation and maintenance of equipment	23
25.8	Subsistence and support of persons	0
26	Supplies and materials	0
31	Equipment	23,019
32	Lands and structures	0
33	Investments and loans	0
41	Grants, subsidies and contributions	0
42	Insurance claims and indemnities	0
43	Interest and dividends	0
44	Refunds	0
99	Total obligations	25,000

Department of Commerce
National Telecommunications and Information Administration
Salaries and Expenses Public Safety Broadband Corporation
SUMMARY OF REQUIREMENTS BY OBJECT CLASS
(Dollar amounts in thousands)

	Object Class	2011 Actual	2012 Enacted	2013 Base	2013 Estimate	2013 Increase/ (Decrease)
11	Personnel compensation					
11.1	Full-time permanent	$0	$0	$0	$608	$608
11.3	Other than full-time permanent	0	0	0	0	0
11.5	Other personnel compensation	0	0	0	0	0
11.8	Special personnel services payments	0	0	0	0	0
11.9	**Total personnel compensation**	0	0	0	608	608
12.1	Civilian personnel benefits	0	0	0	171	171
13	Benefits for former personnel	0	0	0	0	0
21	Travel and transportation of persons	0	0	0	1	1
22	Transportation of things	0	0	0	0	0
23.1	Rental payments to GSA	0	0	0	35	35
23.2	Rental payments to others	0	0	0	0	0
23.3	Communications, utilities and miscellaneous charges	0	0	0	12	12
24	Printing and reproduction	0	0	0	2	2
25.1	Advisory and assistance services	0	0	0	0	0
25.2	Other services	0	0	0	0	0
25.3	Purchases of goods and services from Government accounts	0	0	0	1,129	1,129
25.7	Operation and maintenance of equipment	0	0	0	23	23
26	Supplies and materials	0	0	0	0	0
31	Equipment	0	0	0	23,019	23,019
41	Grants, subsidies and contributions	0	0	0	0	0
99	**TOTAL OBLIGATIONS**	$0	$0	$0	$25,000	$25,000
	Recoveries/Refunds	0	0			
	Unobligated Balance, start of year	0	0			
	Unobligated Balance, end of year	0	0			
	Unobligated Balance, rescinded					
	Total Mandatory Budget Authority	$0	$0	$0	$25,000	$25,000

Department of Commerce
National Telecommunications and Information Administration
Salaries and Expenses Public Safety Broadband Corporation
SUMMARY OF REQUIREMENTS BY OBJECT CLASS
(Dollar amounts in thousands)

Personnel Data	2011 Actual	2012 Enacted	2013 Base	2013 Estimate	2013 Increase/ (Decrease)
Full-Time Equivalent Employment:					
Full-time permanent	0	0	0	5	5
Other than full-time permanent	0	0	0	0	0
Total	0	0	0	5	5
Authorized Positions:					
Full-time permanent	0	0	0	7	7
Other than full-time permanent	0	0	0	0	0
Total	0	0	0	7	7

Department of Commerce
National Telecommunications and Information Administration

Public Telecommunications Facilities, Planning and Construction

SUMMARY OF RESOURCE REQUIREMENTS

(Dollar amounts in thousands)

	Positions	FTE	Budget Authority	Direct Obligations
FY 2012 Enacted	0	0	($2,750)	$3,854
less: Obligations from prior years	0	0	0	(6,604)
plus: 2013 restoration of unobligated balance rescission			2,750	2,750
plus: 2013 adjustments to base	0	0	0	0
2013 Base	0	0	0	0
plus: 2013 program changes	0	0	0	0
2013 Estimate	0	0	0	0

Comparison by activity/subactivity		2011 Actual		2012 Enacted		2013 Base		2013 Estimate		2013 Increase/ (Decrease)	
		Personnel	Amount	Personnel	Amount	Personnel	Amount	Personnel	Amount	Personnel	Amount
Public Telecommunications Facilities, Planning and Construction											
Grants	Pos/BA	0	$0	0	$0	0	$0	0	$0	0	$0
	FTE/Obl.	0	152	0	0	0	0	0	0	0	0
Program management	Pos/BA	4	285	0	(2,750)	0	0	0	0	0	0
	FTE/Obl.	4	1,058	0	3,854	0	0	0	0	0	0
TOTALS	Pos/BA	4	285	0	(2,750)	0	0	0	0	0	0
	FTE/Obl.	4	1,210	0	3,854	0	0	0	0	0	0
Adjustments to Obligations											
Recoveries/Refunds			(6,410)		0		0		0		0
Unobligated Balance, start of year			(1,119)		(6,604)		0		0		0
Unobligated Balance, end of year			6,604		0		0		0		0
Unobligated Balance, rescinded			0		2,750		0		0		0
Financing from transfers:											
Transfer from other accounts (-)			0		0		0		0		0
Transfer to other accounts (+)			0		0		0		0		0
Appropriation			285		0		0		0		0

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Department of Commerce
National Telecommunications and Information Administration
Public Telecommunications Facilities, Planning and Construction
SUMMARY OF FINANCING
(Dollar amounts in thousands)

Comparison by activity	2011 Actual	2012 Enacted	2013 Base	2013 Estimate	2013 Increase/ (Decrease)
Total Obligations	**$1,210**	**$3,854**	**$0**	**$0**	**$0**
Offsetting collections from:					
Federal funds	0	0	0	0	0
Non-Federal sources	0	0	0	0	0
Recoveries/Refunds	(6,410)	0	0	0	0
Unobligated balance, start of year	(1,119)	(6,604)	0	0	0
Unobligated balance, end of year	6,604	0	0	0	0
Unobligated balance, rescinded	0	2,750	0	0	0
Budget Authority	**285**	**0**	**0**	**0**	**0**
Restoration of unobligated balance, rescission	0	0	0	0	0
Financing:					
Transferred from other accounts (-)	0	0	0	0	0
Transferred to other accounts (+)	0	0	0	0	0
Appropriation	**285**	**0**	**0**	**0**	**0**

Department of Commerce
National Telecommunications and Information Administration
Public Telecommunications Facilities, Planning and Construction
PROGRAM AND PERFORMANCE: DIRECT OBLIGATIONS
(Dollar amounts in thousands)

Activity: Public telecommunications, facilities, planning and construction
Subactivity: Grants and program management

Comparison by line item		2011 Actual		2012 Enacted		2013 Base		2013 Estimate		2013 Increase/ (Decrease)	
		Personnel	Amount	Personnel	Amount	Personnel	Amount	Personnel	Amount	Personnel	Amount
Grants	Pos/BA	0	$0	0	$0	0	$0	0	$0	0	$0
	FTE/Obl.	0	152	0	0	0	0	0	0	0	0
Program management	Pos/BA	4	285	0	(2,750)	0	0	0	0	0	0
	FTE/Obl.	4	1,058	0	3,854	0	0	0	0	0	0
Direct Obligations	Pos/BA	4	285	0	(2,750)	0	0	0	0	0	0
	FTE/Obl.	4	1,210	0	3,854	0	0	0	0	0	

APPROPRIATION ACCOUNT: PUBLIC TELECOMMUNICATIONS FACILITIES, PLANNING AND CONSTRUCTION

BUDGET ACTIVITY: PUBLIC TELECOMMUNICATIONS FACILITIES, PLANNING AND CONSTRUCTION

The Public Telecommunications Facilities, Planning and Construction program was discontinued in FY 2011.

Department of Commerce
National Telecommunications and Information Administration
Public Telecommunications Facilities, Planning and Construction
SUMMARY OF REQUIREMENTS BY OBJECT CLASS
(Dollar amounts in thousands)

Object Class		2011 Actual	2012 Enacted	2013 Base	2013 Estimate	2013 Increase/ (Decrease)
11	Personnel compensation					
11.1	Full-time permanent	$390	$390	$0	$0	$0
11.3	Other than full-time permanent	0	0	0	0	0
11.5	Other personnel compensation	0	0	0	0	0
11.8	Special personnel services payments	0	0	0	0	0
11.9	**Total personnel compensation**	390	390	0	0	0
12.1	Civilian personnel benefits	127	130	0	0	0
13	Benefits for former personnel	0	0	0	0	0
21	Travel and transportation of persons	2	4	0	0	0
22	Transportation of things	1	2	0	0	0
23.1	Rental payments to GSA	49	52	0	0	0
23.2	Rental payments to others	0	0	0	0	0
23.3	Communications, utilities and miscellaneous charges	2	4	0	0	0
24	Printing and reproduction	5	10	0	0	0
25.1	Advisory and assistance services	11	12	0	0	0
25.2	Other services	36	150	0	0	0
25.3	Purchases of goods and services from Government accounts	427	3,088	0	0	0
25.7	Operation and maintenance of equipment	0	0	0	0	0
26	Supplies and materials	6	10	0	0	0
31	Equipment	1	2	0	0	0
41	Grants, subsidies and contributions	152	0	0	0	0
99	**TOTAL OBLIGATIONS**	$1,210	$3,854	$0	$0	$0
	Recoveries/Refunds	(6,410)	0			
	Unobligated Balance, start of year	(1,119)	(6,604)			
	Unobligated Balance, end of year	6,604	0			
	Unobligated Balance, rescinded		2,750			
	Total Budget Authority	$285	$0	$0	$0	$0

Department of Commerce
National Telecommunications and Information Administration
Public Telecommunications Facilities, Planning and Construction
SUMMARY OF REQUIREMENTS BY OBJECT CLASS
(Dollar amounts in thousands)

Personnel Data	2011 Actual	2012 Enacted	2013 Base	2013 Estimate	2013 Increase/ (Decrease)
Full-Time Equivalent Employment:					
Full-time permanent	4	0	0	0	0
Other than full-time permanent	0	0	0	0	0
Total	4	0	0	0	0
Authorized Positions:					
Full-time permanent	4	0	0	0	0
Other than full-time permanent	0	0	0	0	0
Total	4	0	0	0	0

Department of Commerce
National Telecommunications and Information Administration
Public Telecommunications Facilities, Planning and Construction
APPROPRIATIONS LANGUAGE AND CODE CITATIONS:

For the administration of prior-year grants, recoveries and unobligated balances of funds previously appropriated are available for the administration of all open grants until their expiration. [(Department of Commerce Appropriations Act, 2012)]

47 U.S.C. § 391 authorizes the Secretary of Commerce to provide grant funds for the planning and construction of public telecommunications facilities by eligible entities.

47 U.S.C. § 392 sets forth the application requirements to be submitted to the Secretary of Commerce by eligible entities to request funds for the construction of public telecommunications facilities.

47 U.S.C. § 02(b)(3) assigns to NTIA the administration of the Public Telecommunications Facilities Program.

Department of Commerce
National Telecommunications and Information Administration
Public Telecommunications Facilities, Planning and Construction
ADVISORY AND ASSISTANCE SERVICES
(Dollar amounts in thousands)

	2011 Actual	2012 Estimate	2013 Estimate
Management and Professional Support Services	$0	$0	$0
Studies, Analysis & Evaluations	0	0	0
Engineering & Technical Services	0	0	0
Total	$0	$0	$0

Department of Commerce
National Telecommunications and Information Administration
Public Telecommunications Facilities, Planning and Construction
PERIODICALS, PAMPHLETS AND AUDIOVISUAL PRODUCTS
(Dollar amounts in thousands)

	2011 Actual	2012 Estimate	2013 Estimate
Periodicals	$0	$0	$0
Pamphlets	0	0	0
Audiovisual Products	0	0	0
Total	$0	$0	$0

Department of Commerce
National Telecommunications and Information Administration
Public Telecommunications Facilities, Planning and Construction
AVERAGE GRADE AND SALARIES
(Dollar amounts in thousands)

	2011 Actual	2012 Estimate	2013 Estimate
Direct:			
Average ES Salary	$0	$0	$0
Average Career Path Salary	0	0	0
Average GS Grade	13.6	13.6	0
Average GS Salary	$105,505	$105,505	$0

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Department of Commerce
National Telecommunications and Information Administration

Information Infrastructure Grants

SUMMARY OF RESOURCE REQUIREMENTS

(Dollar amounts in thousands)

	Positions	FTE	Budget Authority	Direct Obligations
FY 2012 Enacted	0	0	($2,000)	$681
less: Obligations from prior years	0	0	0	(681)
plus: 2013 Restoration of base	0	0	2,000	0
2013 Base	0	0	0	0
plus: 2013 program changes	0	0	0	0
2013 Estimate	0	0	0	0

Comparison by activity/subactivity		2011 Actual		2012 Enacted		2013 Base		2013 Estimate		2013 Increase/ (Decrease)	
		Personnel	Amount	Personnel	Amount	Personnel	Amount	Personnel	Amount	Personnel	Amount
Technology Opportunities Program											
Grants	Pos/BA	0	$0	0	$0	0	$0	0	$0	0	$0
	FTE/Obl.	0	0	0	0	0	0	0	0	0	0
Program management	Pos/BA	0	0	0	(2,000)	0	0	0	0	0	0
	FTE/Obl.	1	170	0	681	0	0	0	0	0	0
TOTALS	Pos/BA	0	0	0	(2,000)	0	0	0	0	0	0
	FTE/Obl.	1	170	0	681	0	0	0	0	0	0
Adjustments to Obligations											
Recoveries/Refunds			(637)		0		0		0		0
Unobligated Balance, start of year			(2,214)		(2,681)		0		0		0
Unobligated Balance, end of year			2,681		0		0		0		0
Unobligated Balance, rescinded			0		2,000		0		0		0
Financing from transfers:											
Transfer from other accounts (-)			0		0		0		0		0
Transfer to other accounts (+)			0		0		0		0		0
Appropriation			0		0		0		0		0

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Department of Commerce
National Telecommunications and Information Administration
Information Infrastructure Grants
SUMMARY OF FINANCING
(Dollar amounts in thousands)

Comparison by activity	2011 Actual	2012 Enacted	2013 Base	2013 Estimate	2013 Increase/ (Decrease)
Total Obligations	**$170**	**$681**	**$0**	**$0**	**$0**
Offsetting collections from:					
Federal funds	0	0	0	0	0
Non-Federal sources	0	0	0	0	0
Recoveries/Refunds	(637)	0	0	0	0
Unobligated balance, start of year	(2,214)	(2,681)	0	0	0
Unobligated balance, end of year	2,681	0	0	0	0
Unobligated balance, rescinded	0	2,000	0	0	0
Budget Authority	**0**	**0**	**0**	**0**	**0**
Financing:					
Transferred from other accounts (-)	0	0	0	0	0
Transferred to other accounts (+)	0	0	0	0	0
Appropriation	**0**	**0**	**0**	**0**	**0**

Department of Commerce
National Telecommunications and Information Administration
Information Infrastructure Grants
PROGRAM AND PERFORMANCE: DIRECT OBLIGATIONS
(Dollar amounts in thousands)

Activity: Information Infrastructure Grants
Subactivity: Grants and program management

Comparison by line item		2011 Actual		2012 Enacted		2013 Base		2013 Estimate		2013 Increase/ (Decrease)	
		Personnel	Amount	Personnel	Amount	Personnel	Amount	Personnel	Amount	Personnel	Amount
Grants	Pos/BA	0	$0	0	$0	0	$0	0	$0	0	$0
	FTE/Obl.	0	0	0	0	0	0	0	0	0	0
Program management	Pos/BA	0	0	0	(2,000)	0	0	0	0	0	0
	FTE/Obl.	1	170	0	681	0	0	0	0	0	0
Direct Obligations	Pos/BA	0	0	0	(2,000)	0	0	0	0	0	0
	FTE/Obl.	1	170	0	681	0	0	0	0	0	0

APPROPRIATION ACCOUNT: INFORMATION INFRASTRUCTURE GRANTS

BUDGET ACTIVITY: INFORMATION INFRASTRUCTURE GRANTS

The Technology Opportunities Program was discontinued in FY 2005.

Department of Commerce
National Telecommunications and Information Administration
Information Infrastructure Grants
SUMMARY OF REQUIREMENTS BY OBJECT CLASS
(Dollar amounts in thousands)

	Object Class	2011 Actual	2012 Enacted	2013 Base	2013 Estimate	2013 Increase/ (Decrease)
11	Personnel compensation					
11.1	Full-time permanent	$2	$100	$0	$0	$0
11.3	Other than full-time permanent	0	0	0	0	0
11.5	Other personnel compensation	0	0	0	0	0
11.8	Special personnel services payments	0	0	0	0	0
11.9	**Total personnel compensation**	2	100	0	0	0
12.1	Civilian personnel benefits	59	26	0	0	0
13	Benefits for former personnel	0	0	0	0	0
21	Travel and transportation of persons	0	0	0	0	0
22	Transportation of things	0	0	0	0	0
23.1	Rental payments to GSA	0	0	0	0	0
23.2	Rental payments to others	0	0	0	0	0
23.3	Communications, utilities and miscellaneous charges	0	0	0	0	0
24	Printing and reproduction	0	0	0	0	0
25.1	Advisory and assistance services	0	0	0	0	0
25.2	Other services	0	0	0	0	0
25.3	Purchases of goods and services from Government accounts	109	555	0	0	0
25.7	Operation and maintenance of equipment	0	0	0	0	0
26	Supplies and materials	0	0	0	0	0
31	Equipment	0	0	0	0	0
41	Grants, subsidies and contributions	0	0	0	0	0
44	Refunds	0	0	0	0	0
99	**TOTAL OBLIGATIONS**	170	681	0	0	0
	Recoveries/Refunds	(637)				
	Unobligated Balance, start of year	(2,214)	(2,681)			
	Unobligated Balance, end of year	2,681				
	Unobligated Balance, rescinded		2,000			
	Total Budget Authority	0	0	0	0	0

Exhibit 16

Department of Commerce
National Telecommunications and Information Administration
Information Infrastructure Grants
SUMMARY OF REQUIREMENTS BY OBJECT CLASS
(Dollar amounts in thousands)

Personnel Data	2011 Actual	2012 Enacted	2013 Base	2013 Estimate	2013 Increase/ (Decrease)
Full-Time Equivalent Employment:					
Full-time permanent	1	0	0	0	0
Other than full-time permanent	0	0	0	0	0
Total	1	0	0	0	0
Authorized Positions:					
Full-time permanent	0	0	0	0	0
Other than full-time permanent	0	0	0	0	0
Total	0	0	0	0	0

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Department of Commerce
National Telecommunications and Information Administration

Digital Television Transition and Public Safety Fund
SUMMARY OF RESOURCE REQUIREMENTS
(Dollar amounts in thousands)

	Positions	FTE	Budget Authority	Direct Obligations
FY 2012 Enacted	0	0	($4,300)	$37,488
ATB: Restoration of offset	0	0	4,300	0
2013 Base	0	0	0	37,488
Change in Mandatory Program	0	0	0	0
2013 Mandatory Estimate		0		0
2013 Discretionary Estimate	0	0	0	0

Comparison by activity/subactivity		FY 2011 Actual		2012 Enacted		2013 Base		2013 Estimate		2013 Increase/ (Decrease)	
		Personnel	Amount	Personnel	Amount	Personnel	Amount	Personnel	Amount	Personnel	Amount
Public Safety Interoperable Communications Grants.....	Pos/BA	0	0	0	0	0	0	0	0	0	0
	FTE/Obl.	2	2,576	1	2,823	0	0	0	0	0	0
Low-Power Television and Translator Upgrade Program……	Pos/BA	0	0	0	0	0	0	0	0	0	0
	FTE/Obl.	2	7,796	1	33,240	0	0	0	0	0	0
National Alert Program……	Pos/BA	0	0	0	0	0	0	0	0	0	0
	FTE/Obl.	1	47,583	2	1,331	0	0	0	0	0	0
Tsunami Warning Program……	Pos/BA	0	0	0	0	0	0	0	0	0	0
	FTE/Obl.	0	0	0	94	0	0	0	0	0	0
TOTALS.....	Pos/BA	0	0	0	-	0	0	0	0	0	0
	FTE/Obl.	5	57,955	4	37,488	0	0	0	0	0	0
Adjustments to Obligations:											
Recoveries/Refunds.....			(2,650)		0	0	0	0	0	0	0
Unobligated Balance, start of year.....			(8,841,885)		(8,786,580)	0	0	0	0	0	0
Unobligated Balance, end of year.....			8,786,580		0	0	0	0	0	0	0
Capital Transfer to General Fund……					8,749,092	0	0	0	0	0	0
Mandatory Budget Authority ……			0		0	0	0	0	0	0	0
Change in Mandatory Program ……			0	0	0	0	0	0	0	0	0
			0	0	0	0	0	0	0	0	0
Total Discretionary Budget Authority ……			0	0	(4,300)	0	0	0	0	0	0

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Department of Commerce
National Telecommunications and Information Administration

Exhibit 8

Digital Television Transition and Public Safety Fund
ADJUSTMENTS TO BASE

Adjustments to Base	FTE	Amount ($000)
Financing		
Resoration of proposed Discretionary rescission for offset	0	$ 4,300
	0	4,300
Total, Adjustments for restoration of offset ……..	0	$ 4,300

Exhibit 9

Department of Commerce
National Telecommunications and Information Administration
Digital Television Transition and Public Safety Fund
JUSTIFICATION OF ADJUSTMENTS TO BASE

Adjustments to Base	FTE	Amount ($000)
Financing		
	0	$ 4,300
In FY 2012, $4,300,000 was rescinded from prior-year unobligated balances. This restoration of base funds will bring the budget authority to zero in FY 2013. There was a Change in a Mandatory Program making those funds available.		
Total, Financing Adjustment to Base	0	$ 4,300

Department of Commerce
National Telecommunications and Information Administration
Digital Television Transition and Public Safety Fund
PROGRAM AND PERFORMANCE: DIRECT OBLIGATIONS
(Dollar amounts in thousands)

Activity: Digital Television Transition and Public Safety Fund
Subactivity: Public Safety Interoperable Communications Grants

Comparison by line item		FY 2011 Actual		2012 Enacted		2013 Base		2013 Estimate		2013 Increase/ (Decrease)	
		Personnel	Amount	Personnel	Amount	Personnel	Amount	Personnel	Amount	Personnel	Amount
Public Safety Interoperable Communications Grants	Pos/BA	0	$0	0	$0	0	$0	0	$0	0	$0
	FTE/Obl.	2	2,576	1	2,823	0	0	0	0	0	0
Direct Obligations.....	Pos/BA	0	0	0	0	0	0	0	0	0	0
	FTE/Obl.	2	2,576	0	2,823	0	0	0	0	0	0

Department of Commerce
National Telecommunications and Information Administration
Digital Television Transition and Public Safety Fund
PROGRAM AND PERFORMANCE: DIRECT OBLIGATIONS
(Dollar amounts in thousands)

Activity: Digital Television Transition and Public Safety Fund
Subactivity: Low-Power Television and Translator Upgrade Program

Comparison by line item		FY 2011 Actual		2012 Enacted		2013 Base		2013 Estimate		2013 Increase/ (Decrease)	
		Personnel	Amount	Personnel	Amount	Personnel	Amount	Personnel	Amount	Personnel	Amount
Low-Power Television and Translator Upgrade Program	Pos/BA	0	$0	0	$0	0	$0	0	$0	0	$0
	FTE/Obl.	2	7,796	2	33,240	0	0	0	0	0	0
Direct Obligations	Pos/BA	0	0	0	0	0	0	0	0	0	0
	FTE/Obl.	2	7,796	2	33,240	0	0	0	0	0	0

Department of Commerce
National Telecommunications and Information Administration
Digital Television Transition and Public Safety Fund
PROGRAM AND PERFORMANCE: DIRECT OBLIGATIONS
(Dollar amounts in thousands)

Activity: Digital Television Transition and Public Safety Fund
Subactivity: National Alert Program

Comparison by line item		FY 2011 Actual		2012 Enacted		2013 Base		2013 Estimate		2013 Increase/ (Decrease)	
		Personnel	Amount	Personnel	Amount	Personnel	Amount	Personnel	Amount	Personnel	Amount
National Alert Program……	Pos/BA	0	$0	0	$0	0	$0	0	$0	0	$0
	FTE/Obl.	1	47,583	1	1,331	0	0	0	0	0	$0
Direct Obligations.....	Pos/BA	0	0	0	0	0	0	0	0	0	0
	FTE/Obl.	1	47,583	1	1,331	0	0	0	0	0	0

Department of Commerce
National Telecommunications and Information Administration
Digital Television Transition and Public Safety Fund
PROGRAM AND PERFORMANCE: DIRECT OBLIGATIONS
(Dollar amounts in thousands)

Activity: Digital Television Transition and Public Safety Fund
Subactivity: Tsunami Warning Program

Comparison by line item		FY 2011 Actual		2012 Enacted		2013 Base		2013 Estimate		2013 Increase/ (Decrease)	
		Personnel	Amount	Personnel	Amount	Personnel	Amount	Personnel	Amount	Personnel	Amount
Tsunami Warning Program ……	Pos/BA	0	$0	0	$0	0	$0	0	$0	0	$0
	FTE/Obl.	0	0	0	94	0	0	0	0	0	$0
Direct Obligations.....	Pos/BA	0	0	0	0	0	0	0	0	0	0
	FTE/Obl.	0	0	0	94	0	0	0	0	0	0

Department of Commerce
National Telecommunications and Information Administration
Digital Television Transition and Public Safety Fund
SUMMARY OF REQUIREMENTS BY OBJECT CLASS
(Dollar amounts in thousands)

	Object Class	FY 2011 Actual	FY 2012 Enacted	2013 Base	2013 Estimate	2013 Increase/ (Decrease)
11	Personnel compensation					
11.1	Full-time permanent	$619	$419	$0	$0	$0
11.3	Other than full-time permanent	0	0	0	0	0
11.5	Other personnel compensation	0	20	0	0	0
11.8	Special personnel services payments	0	0	0	0	0
11.9	**Total personnel compensation**	619	439	0	0	0
12.1	Civilian personnel benefits	206	106	0	0	0
13	Benefits for former personnel	0	0	0	0	0
21	Travel and transportation of persons	16	16	0	0	0
22	Transportation of things	1	1	0	0	0
23.1	Rental payments to GSA	82	90	0	0	0
23.2	Rental payments to others	0	0	0	0	0
23.3	Communications, utilities and miscellaneous charges	3	3	0	0	0
24	Printing and reproduction	5	5	0	0	0
25.1	Advisory and assistance services	0	0	0	0	0
25.2	Other services	46	46	0	0	0
25.3	Purchases of goods and services from Government accounts	21,933	6,051	0	0	0
25.7	Operation and maintenance of equipment	1	0	0	0	0
26	Supplies and materials	10	0	0	0	0
31	Equipment	2	0	0	0	0
41	Grants, subsidies and contributions	35,031	30,731	0	0	0
99	**TOTAL OBLIGATIONS**	$57,955	$37,488	$0	$0	0
	Prior Year Recoveries/Refunds	(2,650)	0	$0	0	0
	Unobligated balances from Prior Years	(8,841,885)	(8,786,580)	0	0	0
	Unobligated balance EOY	0	0	0	0	0
	Capital transfer to General Fund	8,786,580	8,749,092	0	0	0
	Mandatory Budget Authority	0	0	0	0	0
	Change in mandatory program	0	(4,300)	0	0	0
	Total Mandtory Budget Authority	$0	0	$0	$0	0
	Total Discretionary Budget Authority	$0	(4,300)	$0	0	0

Department of Commerce
National Telecommunications and Information Administration
Digital Television Transition and Public Safety Fund
SUMMARY OF REQUIREMENTS BY OBJECT CLASS
(Dollar amounts in thousands)

Personnel Data	2011 Actual	FY 2012 Enacted	2013 Base	2013 Estimate	2013 Increase/ (Decrease)
Full-Time Equivalent Employment:					
Full-time permanent	5	4	0	0	0
Other than full-time permanent	0	0	0	0	0
Total	5	4	0	0	0
Authorized Positions:					
Full-time permanent	5	4	0	0	0
Other than full-time permanent	0	0	0	0	0
Total	0	0	0	0	0

Department of Commerce
National Telecommunications and Information Administration
Public Safety Broadband Network
SUMMARY OF RESOURCE REQUIREMENTS
(Dollar amounts in thousands)

	Positions	FTE	Budget Authority	Direct Obligations
FY 2012 Enacted	0	0	$0	$0
less: Obligations from prior years	0	0	0	0
plus: 2013 adjustments to base	0	0	0	0
2013 Base	0	0	0	0
plus: 2013 program changes	0	35	700,000	87,500
2013 Estimate	0	35	700,000	87,500

Comparison by activity/subactivity		2011 Actual		2012 Enacted		2013 Base		2013 Estimate		2013 Increase/ (Decrease)	
		Personnel	Amount	Personnel	Amount	Personnel	Amount	Personnel	Amount	Personnel	Amount
State and Local Implementation Fund											
Grants	Pos/BA	0	$0	0	$0	0	$0	0	$180,000	0	$180,000
	FTE/Obl.	0	0	0	0	0	0	0	36,000	0	36,000
Program management	Pos/BA	0	0	0	0	0	0	20	20,000	20	20,000
	FTE/Obl.	0	0	0	0	0	0	15	4,000	15	4,000
Totals	Pos/BA	0	0	0	0	0	0	20	200,000	20	200,000
	FTE/Obl.	0	0	0	0	0	0	15	40,000	15	40,000
Incentive Auction Relocation Fund											
Grants	Pos/BA	0	$0	0	$0	0	$0	0	$450,000	0	$450,000
	FTE/Obl.	0	0	0	0	0	0	0	22,500	0	22,500
Program management	Pos/BA	0	0	0	0	0	0	15	50,000	15	50,000
	FTE/Obl.	0						11	2,500	11	2,500
Totals	Pos/BA	0	0	0	0	0	0	15	500,000	15	500,000
	FTE/Obl.	0	0	0	0	0	0	11	25,000	11	25,000
Totals:											
Grants	Pos/BA	0	0	0	0	0	0	0	630,000		$630,000
	FTE/Obl	0	0	0	0	0	0	0	58,500		58,500
Program Management	Pos/BA	0	0	0	0	0	0	15	70,000	35	$70,000
	FTE/Obl	0	0	0	0	0	0	11	29,000	26	29,000
Adjustments to Obligations											
Recoveries/Refunds			0		0		0		0		0
Unobligated Balance, start of year			0		0		0		0		0
Unobligated Balance, end of year			0		0		0		0		0
Unobligated Balance, rescinded			0		0		0		0		0
Financing from transfers:											
Transfer from other accounts (-)			0		0		0		0		0
Transfer to other accounts (+)			0		0		0		0		0
Budget Authority			0		0		0	35	700,000	35	700,000
Financing from Borrowing Authority											
Authority to borrow start of year									200,000		
Borrowed (-)											
Repaid (+)											
Authority to borrow, available end of year											
Financing from appropriated receipts:											
Anticipated receipts, start of year									0		
Repayment to Treasury:											
Borrowings Repaid											
Deficit Reduction											
Obligated not borrowed(-)											
Receipts available end of year									1,216,000		

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Department of Commerce
National Telecommunications and Information Administration
Public Safety Broadband Network
PROGRAM AND PERFORMANCE: DIRECT OBLIGATIONS
(Dollar amounts in thousands)

Activity: State and Local Implementation Fund
Subactivity: Grants and program management

Comparison by line item		2011 Actual		2012 Enacted		2013 Base		2013 Estimate		2013 Increase/ (Decrease)	
		Personnel	Amount	Personnel	Amount	Personnel	Amount	Personnel	Amount	Personnel	Amount
Grants	Pos/BA	0	$0	0	$0	0	$0	0	$180,000	0	$180,000
	FTE/Obl.	0	0	0	0	0	0	0	36,000	0	
Program management	Pos/BA	0	0	0	0	0	0	20	20,000	20	20,000
	FTE/Obl.	0	0	0	0	0	0	15	4,000	15	
Direct Obligations	Pos/BA	0	0	0	0	0	0	20	200,000	20	200,000
	FTE/Obl.	0	0	0	0	0	0	15	40,000	15	

APPROPRIATION ACCOUNT: PUBLIC SAFETY BROADBAND NETWORK

BUDGET ACTIVITY: STATE AND LOCAL IMPLEMENTATION FUND

In support of the President's National Wireless Initiative, the budget proposes to develop a nationwide interoperable public safety broadband network in the 700 MHz band. The Administration will propose legislation to implement this program.

SUBACTIVITY: STATE AND LOCAL IMPLEMENTATION FUND

The program would include the establishment of a State and Local Implementation Grant Program, administered by NTIA, making grants to States to assist State, regional, tribal and local jurisdictions to identify, plan, and implement the most efficient and effective way for such jurisdictions to utilize and integrate the infrastructure, equipment, and other architecture associated with the nationwide public safety interoperable broadband network. The total cost would be $200 million.

The objectives of the Public Safety Broadband Network are to:

- build a nationwide communication network that permits interoperability of public safety equipment;
- efficiently use spectrum dedicated to public safety; and
- ensure accountability through Federal monitoring and oversight of funded entities.

PROGRAM CHANGES:

For FY 2013 $40,000,000 and 15 FTE would be required for implementation. The program would begin in FY 2013, would be administered over several years, and would be offset by new spectrum auctions. The program will be fully funded from the proceeds of anticipated spectrum auctions to be conducted by the Federal Communications Commission (FCC).

Base Resource Assessment:

There is no base funding because this is a new program.

End Goals

- Establish an interoperable public safety broadband network
- Enhance public safety communications capability, including voice and broadband transmission
- Maximize network's efficient use of spectrum
- Leverage commercial wireless broadband infrastructure

PROGRAM CHANGE PERSONNEL DETAIL

Activity: Public Safety Broadband Network
Subactivity: State and Local Implementation Fund

Title:	Location	Grade	Number of Positions	Annual Salary	Total Salaries
Deputy Associate Administrator	Washington, DC	SES-IV	1	155,500	155,500
Communications Program Specialist	Washington, DC	GS-15	2	123,758	247,516
Management and Program Analyst	Washington, DC	GS-15	1	123,758	123,758
Communications Program Specialist	Washington, DC	GS-14	8	105,211	841,688
Communications Program Specialist	Washington, DC	GS-13	3	89,033	267,099
Management and Program Analyst	Washington, DC	GS-13	3	89,033	267,099
Grants Specialist	Washington, DC	GS-12	2	74,872	149,744
Subtotal			20		2,052,404
Less lapse		25%	(5)		(513,101)
Total full-time permanent (FTE)			15		1,539,303
2012 Pay Adjustment (0%)					0
2013 Pay Adjustment (0.5%)					7,697
TOTAL					1,547,000

Personnel Data	Number
Full-Time Equivalent Employment:	
Full-time permanent	15
Other than full-time permanent	0
Total	15
Authorized Positions:	
Full-time permanent	20
Other than full-time permanent	0
Total	20

PROGRAM CHANGE DETAIL BY OBJECT CLASS
(Dollar amounts in thousands)

Activity: Public Safety Broadband Network
Subactivity: State and Local Implementation Fund

	Object Class	2013 Increase
11	Personnel compensation	
11.1	Full-time permanent	1,547
11.3	Other than full-time permanent	0
11.5	Other personnel compensation	0
11.8	Special personnel services payments	0
11.9	Total personnel compensation	1,547
12	Civilian personnel benefits	437
13	Benefits for former personnel	0
21	Travel and transportation of persons	50
22	Transportation of things	1
23.1	Rental payments to GSA	106
23.2	Rental Payments to others	0
23.3	Communications, utilities and miscellaneous charges	35
24	Printing and reproduction	5
25.1	Advisory and assistance services	0
25.2	Other services	626
25.3	Purchases of goods & services from Gov't accounts	930
25.4	Operation and maintenance of facilities	0
25.5	Research and development contracts	0
25.6	Medical care	0
25.7	Operation and maintenance of equipment	41
25.8	Subsistence and support of persons	0
26	Supplies and materials	30
31	Equipment	192
32	Lands and structures	0
33	Investments and loans	0
41	Grants, subsidies and contributions	36,000
42	Insurance claims and indemnities	0
43	Interest and dividends	0
44	Refunds	0
99	Total obligations	40,000

Department of Commerce
National Telecommunications and Information Administration
Public Safety Broadband Network
PROGRAM AND PERFORMANCE: DIRECT OBLIGATIONS
(Dollar amounts in thousands)

Activity: Incentive Auction Fund
Subactivity: Grants and program management

Comparison by line item		2011 Actual		2012 Enacted		2013 Base		2013 Estimate		2013 Increase/ (Decrease)	
		Personnel	Amount	Personnel	Amount	Personnel	Amount	Personnel	Amount	Personnel	Amount
Grants	Pos/BA	0	$0	0	$0	0	$0	0	$500,000	0	$500,000
	FTE/Obl.	0	0	0	0	0	0	0	22,500	0	
Program management	Pos/BA	4	0	0	0	0	0	15	50,000	15	50,000
	FTE/Obl.	4	0	0	0	0	0	11	2,500	11	
Direct Obligations	Pos/BA	4	0	0	0	0	0	15	550,000	15	550,000
	FTE/Obl.	4	0	0	0	0	0	11	25,000	11	

APPROPRIATION ACCOUNT: PUBLIC SAFETY BROADBAND NETWORK

BUDGET ACTIVITY: PUBLIC SAFETY BROADBAND NETWORK

In support of the President's National Wireless Initiative, the Budget proposes to invest $7 billion to develop a nationwide interoperable public safety broadband network in the 700 MHz band. This investment will be fully offset by expected proceeds from anticipated spectrum auctions to be conducted by the Federal Communications Commission (FCC) and deposited in the Public Safety Trust Fund. Additionally there would be an Incentive Auction Relocation Fund in the amount of $500 million to help cover the relocation costs of TV broadcasters resulting from the incentive auctions. The Assistant Secretary for Communications and Information will administer the Public Safety Trust Fund and may borrow from the General Fund of the Treasury such sums as necessary to implement the State and Local Implementation Grant Program while awaiting spectrum auction proceeds

SUBACTIVITY: INCENTIVE AUCTION RELOCATION FUND

Assuming specific statutory authority is provided, incentive auction proceeds will be deposited in the Public Safety Trust Fund established within Treasury. Within guidelines established in the program, NTIA, in consultation with FCC, will use the funds to cover costs of TV broadcast stations that are relocated following auction or impacted by such relocations and costs incurred by multichannel video programming distributors related to the carriage of such relocated station or carriage of stations that voluntarily elect to share a channel. The total cost is estimated at $500 million.

PROGRAM CHANGES:

For FY 2013 $25,000,000 and 11 FTE would be required for implementation. The program would begin in FY 2013, would be administered over several years . The program will be fully funded from the proceeds of anticipated spectrum auctions to be conducted by the Federal Communications Commission (FCC).

Base Resource Assessment:

There is no base funding because this is a new program.

End Goals

- Establish an interoperable public safety broadband network
- Enhance public safety communications capability, including voice and broadband transmission
- Maximize network's efficient use of spectrum
- Leverage commercial wireless broadband infrastructure

PROGRAM CHANGE PERSONNEL DETAIL

Activity: Public Safety Broadband Network
Subactivity: Incentive Auction Relocation Fund

Title:	Location	Grade	Number of Positions	Annual Salary	Total Salaries
Communications Program Specialist	Washington, DC	GS-15	2	123,758	247,516
Management and Program Analyst	Washington, DC	GS-15	1	123,758	123,758
Communications Program Specialist	Washington, DC	GS-14	7	105,211	736,477
Communications Program Specialist	Washington, DC	GS-13	1	89,033	89,033
Management and Program Analyst	Washington, DC	GS-13	2	89,033	178,066
Management and Program Analyst	Washington, DC	GS-12	2	74,872	149,744
Subtotal			15		1,524,594
Less lapse		25%	(4)		(381,149)
Total full-time permanent (FTE)			11		1,143,446
2012 Pay Adjustment (0%)					0
2013 Pay Adjustment (0.5%)					5,717
TOTAL					1,149,163

Personnel Data	Number
Full-Time Equivalent Employment:	
Full-time permanent	11
Other than full-time permanent	0
Total	11
Authorized Positions:	
Full-time permanent	15
Other than full-time permanent	0
Total	15

PROGRAM CHANGE DETAIL BY OBJECT CLASS
(Dollar amounts in thousands)

Activity: Public Safety Broadband Network
Subactivity: Incentive Auction Relocation Fund

	Object Class	2013 Increase
11	Personnel compensation	
11.1	Full-time permanent	1,149
11.3	Other than full-time permanent	0
11.5	Other personnel compensation	0
11.8	Special personnel services payments	0
11.9	Total personnel compensation	1,149
12	Civilian personnel benefits	325
13	Benefits for former personnel	0
21	Travel and transportation of persons	35
22	Transportation of things	0
23.1	Rental payments to GSA	80
23.2	Rental Payments to others	0
23.3	Communications, utilities and miscellaneous charges	27
24	Printing and reproduction	4
25.1	Advisory and assistance services	0
25.2	Other services	133
25.3	Purchases of goods & services from Gov't accounts	539
25.4	Operation and maintenance of facilities	0
25.5	Research and development contracts	0
25.6	Medical care	0
25.7	Operation and maintenance of equipment	31
25.8	Subsistence and support of persons	0
26	Supplies and materials	22
31	Equipment	155
32	Lands and structures	0
33	Investments and loans	0
41	Grants, subsidies and contributions	22,500
42	Insurance claims and indemnities	0
43	Interest and dividends	0
44	Refunds	0
99	Total obligations	25,000

Department of Commerce
National Telecommunications and Information Administration
Public Safety Broadband Network
SUMMARY OF REQUIREMENTS BY OBJECT CLASS
(Dollar amounts in thousands)

Object Class		2011 Actual	2012 Enacted	2013 Base	2013 Estimate	2013 Increase/ (Decrease)
11	Personnel compensation					
11.1	Full-time permanent	$0	$0	$0	$2,696	2,696
11.3	Other than full-time permanent	0	0	0	0	0
11.5	Other personnel compensation	0	0	0	0	0
11.8	Special personnel services payments	0	0	0	0	0
11.9	**Total personnel compensation**	0	0	0	2,696	2,696
12.1	Civilian personnel benefits	0	0	0	762	762
13	Benefits for former personnel	0	0	0	0	0
21	Travel and transportation of persons	0	0	0	85	85
22	Transportation of things	0	0	0	1	1
23.1	Rental payments to GSA	0	0	0	186	186
23.2	Rental payments to others	0	0	0	0	0
23.3	Communications, utilities and miscellaneous charges	0	0	0	59	59
24	Printing and reproduction	0	0	0	9	9
25.1	Advisory and assistance services	0	0	0	0	0
25.2	Other services	0	0	0	759	759
25.3	Purchases of goods and services from Government accounts	0	0	0	1,472	1,472
25.7	Operation and maintenance of equipment	0	0	0	72	72
26	Supplies and materials	0	0	0	52	52
31	Equipment	0	0	0	347	347
41	Grants, subsidies and contributions	0	0	0	58,500	58,500
99	**TOTAL OBLIGATIONS**	$0	$0	$0	$65,000	$65,000
	Recoveries/Refunds	0	0			
	Unobligated Balance, start of year	0				
	Unobligated Balance, end of year	0				
	Unobligated Balance, rescinded		0			
	Total Budget Authority	$0	$0	$0	$65,000	$65,000

Department of Commerce
National Telecommunications and Information Administration
Public Safety Broadband Network
SUMMARY OF REQUIREMENTS BY OBJECT CLASS
(Dollar amounts in thousands)

Personnel Data	2011 Actual	2012 Enacted	2013 Base	2013 Estimate	2013 Increase/ (Decrease)
Full-Time Equivalent Employment:					
Full-time permanent	0	0	0	26	26
Other than full-time permanent	0	0	0	0	0
Total	0	0	0	26	26
Authorized Positions:					
Full-time permanent	0	0	0	35	35
Other than full-time permanent	0	0	0	0	0
Total	0	0	0	35	35