

Implementation Plan for the President's Initiative on Spectrum Management

November 2008 Update

- ***Project A:*** Improve Stakeholder Participation and Maintain High Qualifications of Spectrum Managers
- ***Project B:*** Reduce International Barriers to U.S. Innovations in Technologies and Services
- ***Project C:*** Modernize Federal Spectrum Management Processes with Advanced Information Technology
- ***Project D:*** Satisfy Public Safety Communication Needs and Ensure Interoperability
- ***Project E:*** Enhance Spectrum Engineering and Analytical Tools
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Appendix 1

PRESIDENTIAL INITIATIVE ON SPECTRUM MANAGEMENT NOVEMBER 2008 UPDATE TO IMPLEMENTATION PLAN

Status of Deliverables and Target Dates

Project A: Improve Stakeholder Participation and Maintain High Qualifications of Spectrum Managers		
<i>Task</i>	<i>Deliverables</i>	<i>Status/Target Deliverable Dates</i>
A.1. Establish a Commerce Spectrum Management Advisory Committee (CSMAC)	The NTIA established the Department's CSMAC to provide advice and recommendations to the Assistant Secretary for Communications and Information on a broad range of issues regarding spectrum policy, including the implementation of innovative technologies and services.	
	Advisory Committee Charter	May 2005
	Establishment of CSMAC	Jan. 2006
	Public meetings	Dec. 2006; May 2007; Dec. 2007; Feb. 2008; Apr. 2008; Jul. 2008
	Advice to NTIA on Spectrum Sharing Test-Bed	Advice provided in Nov. 2007
	Committee reports	To be completed Sept.-Dec. 2008
	Final Report to NTIA	Draft to be completed TBD

<p>A.2. Establish a High Level Interagency Advisory Group -- Policy and Plans Steering Group (PPSG)</p>	<p>The role of the PPSG, comprised of Assistant Secretaries or their equivalents in major spectrum-using Federal agencies is to advise the Assistant Secretary on complex and pressing spectrum issues that affect federal agencies.</p>	<p>Meetings – Jan. 2005; Mar. 2005; Oct. 2007; Mar. 2008; Jul. 2008</p>
<p>A.3. Resolve Inter-governmental Spectrum Disputes Through the Existing White House Policy Coordinating Committee (PCC) Process and Revise the NTIA/FCC MOU to Provide an Additional Minimum 15 Business Days to Accommodate the PCC Process</p>	<p>MOU between NTIA and the FCC to provide additional minimum 15 business days to accommodate PCC process of resolving coordination issues between FCC and executive branch agencies</p>	<p>PCC is on-going</p> <p>NTIA submitted revised proposed MOU language to the FCC in May. 2008</p> <p>Coordination with the FCC is on-going and the MOU is expected to be finalized year-end 2008</p>
<p>A.4. Expand the Role of the FCC Defense Commissioner.</p>	<p>MOU between NTIA and the FCC to expand the role of the FCC Defense Commissioner</p>	<p>NTIA submitted revised proposed language to the FCC in May 2008</p> <p>Coordination with the FCC is on-going and the MOU is expected to be finalized year-end 2008</p>
<p>A.5. Promote a Career Development Program and Spectrum Management Training</p>		<p>Program reactivated in Jan. 2008; Master plan expected to be completed in Dec. 2009</p>

Project B: Reduce International Barriers to U.S. Innovations in Technologies and Services		
<i>Tasks</i>	<i>Deliverables</i>	<i>Status/Target Deliverable Dates</i>
B.1. Improve U.S. Preparations for World Radiocommunication Conferences (WRCs)	Study and recommendations on improvements to U.S. preparations	Completed. Report issued in May 2005
B.2. Improve International Spectrum Management Policies and Regulatory Environment	Study and recommendations on Impact of International Spectrum Management Policies and Regulatory Environment on U.S. competitiveness	Completed. Expected to be published in 2008

Project C: Modernize Federal Spectrum Management Processes with Advanced Information Technology		
<i>Tasks</i>	<i>Deliverables</i>	<i>Status/Target Deliverable Dates</i>
C.1. Implement Advanced Information Management Systems	The Federal Spectrum Management System (FSMS) will utilize advanced information technology to develop a web-based process for preparing and processing applications for spectrum certification and frequency assignments. It will consolidate existing paper-based and multiple software systems, including Spectrum XXI and El-Cid.	On-going project. The system will be developed pursuant to a contract with a system integrator in conjunction with NTIA staff and with input from the Federal agency user community. Initial capabilities to be implemented in FY09.

Project D: Satisfy Public Safety Communication Needs and Ensure Interoperability		
<i>Tasks</i>	<i>Deliverables</i>	<i>Status/Target Deliverable Dates</i>
D.1. Spectrum Sharing between Federal and Non-Federal Public Safety Agencies	Assessment of feasibility of spectrum sharing between Federal and non-Federal Public Safety Entities	Completed. Report on Federal/non-Federal spectrum and infrastructure sharing published Jun. 2007

Project E: Enhance Spectrum Engineering and Analytical Tools		
<i>Tasks</i>	<i>Deliverables</i>	<i>Status/Target Deliverable Dates</i>
E.1. Develop Analytic Approaches, Software Tools, and Engineering Techniques for Evaluating and Improving the Efficiency and Effectiveness of Federal Spectrum Use	The deliverables will be a series of reports that make recommendations for improving spectrum efficiency for the following radio services: land mobile radio, fixed, radiolocation, and satellite. These reports will be used to develop a spectrum efficiency recommendations report that includes an approach and timeframe for implementing the recommendations. The goal of these activities is to identify and utilize the recommended techniques to improve efficiency in Federal use of spectrum.	Report on Spectrum Efficiency Recommendations Expected completion in Sept. 2010
	(1) NTIA Report 08-451, Assessment of Alternative Future Federal Land Mobile Radio Systems	(1) Published in Dec. 2007
	(2) NTIA Report 07-448, Measurements of Land Mobile Channel Occupancy for Federal bands 162-174 MHz and 406-420 MHz in the Washington, D.C. Area	(2) Published in Jul. 2007
	(3) NTIA Report 07-447, Assessment of Federal and Non-Federal Land Mobile Radio Frequency Assignment Methodologies	(3) Published in May 2007
	(4) NTIA Report 06-440, Federal Land Mobile Operations in the 162-174 MHz Band in the Washington, D.C., area; Phase 1: Study of Agency Operations	(4) Published in Aug. 2006
	(5) Recommendations to Improve Spectrum Efficiency in the Federal Land Mobile Radio Frequency Bands	(5) To be sent to Federal agencies for review in 3 rd Quarter 2009
	(6) Assessment of Federal and Non-Federal Fixed Point-to-Point Microwave Radio Frequency Assignment Methodologies	(6) Under review by the Federal agencies Expected in 3 rd Quarter 2009
	(7) Channel plans for the 4 GHz and 7/8 GHz fixed service bands	(7) Completed in Jul. 2007
	(8) Implement channel plans for the 4 GHz and 7/8 GHz fixed service bands	(8) Expected completion in 2 nd Quarter 2009

<p>E.2. Develop and Promote Recognition in the Spectrum Management Community for Best Practices in Spectrum Engineering</p>	<p>Best Practices Handbook</p>	<p>Best Practices Handbook Expected completion in Dec. 2010</p>
	<p>(1) NTIA Report TR-06-444, Effects of Interference on Radar Receivers</p>	<p>(1) Published in Sept. 2006</p>
	<p>(2) NTIA Report TR-07-449 Propagation Loss Prediction Considerations for Close-In Distances and Low-Antenna Height Applications</p>	<p>(2) Published in Jul. 2007</p>
	<p>(3) JSC-CR-06-072, DOD Joint Spectrum Center Report prepared for NTIA, Communications Receiver Performance Degradation Handbook</p>	<p>(3) Published in Nov. 2006</p>
	<p>(4) Technical Memorandum on radiowave propagation modeling</p>	<p>(4) Review by Federal agencies completed in Jul. 2008; expected completion in 4th Quarter 2009</p>
	<p>(5) Technical Memorandum on antenna modeling</p>	<p>(5) Review by Federal agencies completed in Jul. 2008; expected completion in 4th Quarter 2009</p>
	<p>(6) Technical Memorandum on single entry interference protection criteria</p>	<p>(6) Federal agencies review to be completed by 3rd Quarter 2009</p>

E.3. Conduct a Pilot Program to Evaluate Approaches and Techniques to Increase Spectrum Sharing Between Federal and Non-federal Spectrum Users	Establish, conduct and evaluate results of use of devices and technologies to facilitate sharing through Spectrum Sharing Innovation Test-Bed	
	(1) Notice of Inquiry	(1) Jun. 2006
	(2) Notice of Solicitation for Participation in the Test-Bed,73 Fed. Reg. 6710 (Feb. 5,2008)	(2) FR Notice published in Feb. 2008
	(3) Submission of Test-Bed Applications	(3) Submitted in Feb. 2008
	(4) Selection of Test-Bed Participants	(4) Completed in June 2008
	(5) Phase I test plans	(5) Expected to be completed in Nov. 2008
	(6) Phase I testing	(6) Expected to commence by Jan. 2009
	(7) FY2008 Test-Bed Progress Report	(7) Expected completion in Nov. 2008

E.4. Develop and Promote the Use of Modern Analytic Tools	Catalog with spectrum management analytical tools	
	(1) Prepare initial spectrum management models and tools catalog for use by Federal spectrum users	(1) Review by Federal agencies completed in May 2008 Expected completion in 3 rd Quarter 2009
	(2) Initial catalog of spectrum management analytical tools provided to Enterprise Architecture Council Working Party 4	(2) Under review by EAC WP 4 Expected completion of 4 th Quarter 2009
	(3) Official catalog is an on-going effort requiring constant updates when new spectrum management analytical tools are developed.	(3) On-going

Project F: Promote Efficient and Effective Use of Spectrum		
<i>Task</i>	<i>Deliverables</i>	<i>Status/Target Deliverable Dates</i>
F.1. Improve the Technical Planning Process	Recommended changes to the NTIA Manual with respect to the Spectrum Certification process.	Expected completion in 1 st Quarter 2009

Project G: Improve Long-Range Planning and Promote Use of Market-Based Economic Mechanisms in Spectrum

<i>Task</i>	<i>Deliverables</i>	<i>Status/Target Deliverable Dates</i>
G.1. Improve the Processes for Federal Agencies' Spectrum Planning and Produce a National Spectrum Plan	Federal Strategic Spectrum Plan published biannually; Annual Reports on Progress with respect to the President's Initiative; National Strategic Spectrum Plan; guidance to the Federal agencies concerning agency strategic spectrum planning	
	(1) Federal Strategic Spectrum Plan	(1) Published in Mar. 2008
	(2) Activities within WLG-G with respect to Federal agency strategic spectrum planning	(2) On-going
	(3) Update to FSSP	(3) Expected completion of draft in Dec. 2008
	(4) FY2007 Progress Report on the President's Initiative	(4) Expected publication in Nov. 2008
	(5) FY2008 Progress Report on the President's Initiative	(5) Expected completion of draft in Jan. 2008
	(6) Develop a National Strategic Spectrum Plan (NSSP)	(6) Letter to FCC seeking participation in June 2008; expected completion in Jul. 2010
	(6a) Draft options for obtaining data relating to non-Federal spectrum use and future requirements such as NOI	(6a) Expected completion in Jan. 2009
	(6b) Draft outline of NSSP (Note: requires coordination with and participation of FCC)	(6b) Expected completion in Feb. 2009
	(6c) Gather Data	(6c) Jun.-Sept. 2009
	(6d) Draft NSSP	(6d) Expected completion in Feb. 2010

	(6e) Publish NSSP	(6e) Expected completion in Jul. 2010
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<p>G.2. Improve Federal Agencies' Processes and Procedures to Better Consider the Economic Value of Spectrum When Investing in Spectrum-Dependent Systems</p>	<p>Guidance to the Federal agencies on compliance with Section 33.4 of OMB Circular A-11 on considering spectrum value when seeking funding for major spectrum-dependent systems; guidance to the Federal agencies concerning integration of spectrum planning with capital and strategic planning</p>	
	<p>(1) OMB guidance - OMB added Section 33.4 to Circular A-11 to require Federal agencies to consider the value of spectrum for major spectrum-dependent systems</p>	<p>(1) Nov. 2004</p>
	<p>(2) Guidance to Federal agencies on compliance with Section 33.4 of Circular A-11 - Draft guidance paper within WLG-G (WLG-G-07/ 39 rev.2) (Note: awaiting input on method for calculating the economic value of spectrum)</p>	<p>(2) Expected completion in Jun. 2009</p>
	<p>(3) Integration of Spectrum Management Decision-making into Agency Capital Planning and Strategic Planning Activities (Note - Draft guidance paper within WLG-G (WLG-G-07/ 39 rev.2) - awaiting input on method for calculating the economic value of spectrum)</p>	<p>(3) On-going</p>
	<p>(4) In conjunction with WLG-F consideration of whether revisions to NTIA Manual may be required (Note - discussions with OMB may be required concerning relationship with Section 33.4)</p>	<p>(4) On-going</p>

<p>G.3. Develop a Plan to Identify and Implement Incentives for Improving Efficiency in Federal Agencies' Spectrum Use (in conjunction with the Office of Policy Analysis and Development)</p>	<p>Incentives Implementation Plan; workshop on economic and other incentives for efficient use of spectrum; study on international practices with respect to incorporation of market mechanisms into spectrum management</p>	
	<p>(1) Prepare Incentives Implementation Plan</p>	<p>(1) Forwarded to the White House in Mar. 2006; published Nov.2008</p>
	<p>(2) Conduct workshop on the use of economic or other incentives in order to increase the efficiency of Federal and non-Federal spectrum use</p>	<p>(2) Feb. 2006</p>
	<p>(3) Examine international practices that incorporate market mechanisms into more efficient spectrum use</p>	<p>(3) Study (unpublished) completed in 2006</p>

<p>G.4 Promote the Implementation of a Wide Range of Incentives to Improve the Efficiencies of Both Government and Private Sector Spectrum Use (in conjunction with the Office of Policy Analysis and Development)</p>	<p>Contractor-produced study providing unit of consumption for spectrum use; revised structure for current OSM cost-recovery fee for Federal agency spectrum use; study on Federal spectrum value and development of fees to promote efficient use of spectrum; draft legislation to implement spectrum use fees; study on sharing between Federal agencies and non-Federal unlicensed systems; study on Federal spectrum rights; proposals to provide Federal agency more flexible rights with respect to spectrum to enable sharing with other Federal agencies and non-Federal entities</p>	
	<p>(1) Enter into contract or MOU with outside organization to develop a unit of consumption for and a methodology to estimate the value of spectrum used by the Federal government (OPAD lead with support from OSM)</p>	<p>(1) TBD</p>
	<p>(2) Consideration of revised structure for administrative cost-recovery fees (OSM lead)</p>	<p>(2) TBD</p>
	<p>(3) Evaluation of possible spectrum use fees applied to Federal agency spectrum use based on spectrum use/value (dependent on completion of contracted study under (1) above)</p>	<p>(3) Expected completion TBD</p>
	<p>(4) Evaluation of possible draft legislation to implement a spectrum use fee (dependent on completion of (1) and (3) above)</p>	<p>(4) Expected completion TBD</p>
	<p>(5) Consideration of possible implementation of spectrum use fees for Federal agencies (dependent on (1), (3), (4) and Congressional action)</p>	<p>(5) Expected completion TBD</p>
	<p>(6) Case study on 5 GHz sharing and specific proposals to increase sharing through new technologies and techniques for dynamic spectrum sharing</p>	<p>(6) Expected completion in Oct. 2008</p>
	<p>(7) Study of the rights afforded to federal spectrum users and proposals to give Federal agencies broader authority to use radio spectrum</p>	<p>(7) Expected completion TBD</p>

Appendix 2

Presidential Initiative on Spectrum Management: Published Reports and Reference Documents

1. Presidential Memorandums

Memorandum for the Heads of Executive Departments and Agencies on Spectrum Policy for the 21st Century. 69 Fed. Reg. 1568 (Jan. 9, 2004), 39 Weekly Comp. Pres. Doc. 726, 727 (May 29, 2003) available at http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?dbname=2003_presidential_documents&docid=pd09jn03_txt-19.pdf (see pdf attached).

President's Memorandum on Improving Spectrum Management for the 21st Century, 49 Weekly Comp. Pres. Doc. 2875, §3(c) (Nov. 29, 2004) (2004 Executive Memorandum) available at http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?dbname=2004_presidential_documents&docid=pd06de04_txt-11.pdf (see pdf attached).

2. Task Force Reports

National Telecommunications and Information Administration, U.S. Department of Commerce, *Spectrum Policy for the 21st Century – The President's Spectrum Policy Initiative: Report 1*, (2004) (Recommendations of the Federal Government Spectrum Task Force -Report 1), available at http://www.ntia.doc.gov/reports/specpolini/pressspecpolini_report1_06242004.htm.

National Telecommunications and Information Administration, U.S. Department of Commerce, *Spectrum Policy for the 21st Century – The President's Spectrum Policy Initiative: Report 2* (2004) (Recommendations from State and Local Governments and Private Sector Responders -Report 2), available at http://www.ntia.doc.gov/reports/specpolini/pressspecpolini_report2_06242004.htm.

3. Implementation Plan

National Telecommunications and Information Administration, U.S. Department of Commerce, *Spectrum Policy for the 21st Century – The President's Spectrum Policy Initiative – Implementation Plan*, March, 2006, available at <http://www.ntia.doc.gov/osmhome/reports/ImplementationPlan2006.htm>.

1. Annual Progress Reports

National Telecommunications and Information Administration, U.S. Department of Commerce, *Spectrum Policy for the 21st Century – The President’s Spectrum Policy Initiative*: First Annual Progress Report (unpublished).

National Telecommunications and Information Administration, U.S. Department of Commerce, *Spectrum Policy for the 21st Century – The President’s Spectrum Policy Initiative*: Second Annual Progress Report (October, 2007), available at <http://www.ntia.doc.gov/reports/2007/SpectrumPolicySecondReport2007.pdf>.

National Telecommunications and Information Administration, U.S. Department of Commerce, *Spectrum Policy for the 21st Century – The President’s Spectrum Policy Initiative*: FY2007 Progress Report (November, 2008).

2. Federal Strategic Spectrum Plan

National Telecommunications and Information Administration, U.S. Department of Commerce, *Spectrum Policy for the 21st Century – The President’s Spectrum Policy Initiative: The Federal Strategic Spectrum Plan* (March, 2008), available at <http://www.ntia.doc.gov/reports/2007/SpectrumPolicySecondReport2007.pdf>.

6. International Reports

National Telecommunications and Information Administration, U.S. Department of Commerce,
World Radiocommunication Conferences: Recommendations for Improvement in the U.S. Preparatory Process, NTIA Report No. 05-427, May, 2005, available at http://www.ntia.doc.gov/reports/wrc/wrc_05232005.htm.

National Telecommunications and Information Administration, U.S. Department of Commerce, *Spectrum Policy for the 21st Century – The President’s Spectrum Policy Initiative: Improving International Spectrum Management Policies and Framework* (March 2008).

7. Spectrum Sharing between Federal, State and Local Public Safety Entities

National Telecommunications and Information Administration, U.S. Dep’t of Commerce, *A Public Safety Sharing Demonstration*, June, 2007, available at <http://www.ntia.doc.gov/reports/2007/NTIAWARNReport.htm>.

8. Technical Studies

Report No. Report Title

08-451	Assessment of Alternative Future Federal Land Mobile Radio Systems (Acrobat PDF 978 Kb)
07-447	Assessment of Federal and Non-Federal Land Mobile Radio Frequency Assignment Methodologies (Acrobat PDF 477 KB)
JSC-CR-06-072	Communications Receiver Performance Degradation Handbook - November 2006 (Acrobat PDF 1,682 KB)
06-440	Federal Land Mobile Operations in the 162-174 MHz Band in the Washington, D.C., Area Phase 1: Study of Agency Operations - <i>August 2006</i> (MS Word, 151 pages) [also available in Adobe Acrobat format - 12.5Mb].
05-432	 Interference Protection Criteria: Phase 1 - Compilation from Existing Sources technical report (514 KB) [also available in MS word format (2.2 MB)].
TR-07-448	Measurements to Characterize Land Mobile Channel Occupancy for Federal Bands 162-174 MHz and 406-420 MHz in the Washington D.C. Area
TR-07-449	Propagation Loss Prediction Considerations for Close-In Distances and Low-Antenna Height Applications

Appendix 3



For Immediate Release
Office of the Press Secretary
November 30, 2004

Presidential Determination: Memorandum for the Heads of Executive Departments and Agencies

MEMORANDUM FOR THE HEADS OF EXECUTIVE DEPARTMENTS AND AGENCIES

SUBJECT: Improving Spectrum Management for the 21st Century

In May 2003, I established the Spectrum Policy Initiative to promote the development and implementation of a U.S. spectrum management policy for the 21st century. This initiative will foster economic growth; promote our national and homeland security; maintain U.S. global leadership in communications technology; and satisfy other vital U.S. needs in areas such as public safety, scientific research, Federal transportation infrastructure, and law enforcement.

The existing legal and policy framework for spectrum management has not kept pace with the dramatic changes in technology and spectrum use. Under the existing framework, the Federal Government generally reviews every change in spectrum use. This process is often slow and inflexible and can discourage the introduction of new technologies. Some spectrum users, including Government agencies, have argued that the existing spectrum process is insufficiently responsive to the need to protect current critical uses.

As a result, I directed the Secretary of Commerce to prepare recommendations for improving spectrum management. The Secretary of Commerce then established a Federal Government Spectrum Task Force and initiated a series of public meetings to address improvements in policies affecting spectrum use by the Federal Government, State, and local governments, and the private sector. The recommendations resulting from these activities were included in a two-part series of reports released by the Secretary of Commerce in June 2004, under the title Spectrum Policy for the 21st Century - The Presidents Spectrum Policy Initiative (Reports).

Therefore, to the extent permitted by law and within existing appropriations, I hereby direct the heads of executive departments and agencies (agencies) to implement the recommendations in the Reports as follows:

Section 1. Office of Management and Budget.

Within 6 months of the date of this memorandum, the Office of Management and Budget (OMB) shall provide guidance to the agencies for improving capital planning and investment control procedures to better identify spectrum requirements and the costs of investments in spectrum-dependent programs and systems. Within 1 year of the date of this memorandum, agencies shall implement methods for improving capital planning and investment control procedures consistent with the OMB guidance, including making any modifications to agency capital planning

procedures necessary to ensure greater consideration of more efficient and cost-effective spectrum use.

Section 2. Other Executive Departments and Agencies.

(a) Within 1 year of the date of this memorandum, the heads of agencies selected by the Secretary of Commerce shall provide agency-specific strategic spectrum plans (agency plans) to the Secretary of Commerce that include: (1) spectrum requirements, including bandwidth and frequency location for future technologies or services; (2) the planned uses of new technologies or expanded services requiring spectrum over a period of time agreed to by the selected agencies; and (3) suggested spectrum efficient approaches to meeting identified spectrum requirements. The heads of agencies shall update their agency plans biennially. In addition, the heads of agencies will implement a formal process to evaluate their pro-posed needs for spectrum. Such process shall include an analysis and assessment of the options available to obtain the associated communications services that are most spectrum-efficient and the effective alternatives available to meet the agency mission requirements. Heads of agencies shall provide their analysis and assessment to the National Telecommunications and Information Administration (NTIA) for review when seeking spectrum certification from the NTIA.

(b) Within 6 months of the date of this memorandum, the Secretary of Homeland Security, in coordination with the Secretary of Commerce and, as appropriate, the Chairman of the Federal Communications Commission, and considering the views of representatives from: (1) the public safety community, (2) State, local, tribal, and regional governments; and (3) the private sector, shall identify public safety spectrum needs.

(c) Within 1 year of the date of this memorandum, the Secretary of Homeland Security, in consultation with the Secretary of Commerce, the Director of the Office of Science and Technology Policy, the Director of the Office of Management and Budget, the Attorney General, the Secretaries of State, Defense, Transportation, Agriculture, and the Interior, the heads of other appropriate agencies, and, as appropriate, the Chairman of the Federal Communications Commission, shall develop a comprehensive plan, the Spectrum Needs Plan, to address issues related to communication spectrum used by the public safety community, as well as the continuity of Government operations. The Spectrum Needs Plan shall be submitted to the President through the Assistant to the President for Homeland Security, in coordination with the Assistant to the President for Economic Policy and other relevant components of the Executive Office of the President.

Section 3. Department of Commerce.

(a) Within 6 months after receiving the agency plans developed in section 2(a) of this memorandum, the Secretary of Commerce shall integrate the agency plans and Spectrum Needs Plan, based upon a Department of Commerce framework, into a Federal Strategic Spectrum Plan and shall assist in the formulation of a National Strategic Spectrum Plan. The Secretary of Commerce, in consultation with the Chairman of the Federal Communications Commission, as appropriate, shall update the National Strategic Spectrum Plan on a biennial basis thereafter.

(b) Within 1 year of the date of this memorandum, the Secretary of Commerce, in coordination with other relevant Federal agencies identified by the Secretary, shall develop a plan for identifying and implementing incentives that promote more efficient and effective use of the spectrum while protecting national and homeland security, critical infrastructure, and Government services.

(c) Within 6 months of the date of this memorandum, the Secretary of Commerce shall establish a plan for the implementation of all other recommendations included in the Reports. Not more than

1 year from the date of this memorandum, the Secretary of Commerce shall provide to the President a report describing the progress on implementing the recommendations in the Reports. The report shall include a section prepared by the Secretary of Homeland Security that describes the progress made with respect to public safety spectrum issues. This report shall be updated on an annual basis, until completion of the actions required by this memorandum. The heads of agencies shall provide the Secretary of Commerce and the Secretary of Homeland Security with any assistance or information required in the preparation of the annual report.

(d) The plans in sections 3(a)-(c) and the annual report developed in section 3(c) of this memorandum shall be submitted to the President through the Assistant to the President for Economic Policy, in coordination with the Assistant to the President for National Security Affairs and other relevant components of the Executive Office of the President.

(e) As appropriate, the Secretary of Commerce and heads of other agencies shall consult with the Chairman of the Federal Communications Commission regarding the implementation of the recommendations in the Reports.

Section 4. General.

(a) Nothing in this memorandum shall be construed to impair or otherwise affect the functions of the Director of the Office of Management and Budget relating to budget, administrative, or legislative proposals.

(b) This memorandum is intended only to improve the internal management of the Federal Government and is not intended to, and does not, create any right or benefit, substantive or procedural, enforceable at law or in equity, by a party against the United States, its departments, agencies, entities, instrumentalities, its officers or employees, or any other person.

(c) This order shall be implemented in a manner consistent with existing statutes, treaties, Executive Agreements, and Executive Orders affecting the operation of any of the departments, agencies, or instrumentalities of the Federal Government.

GEORGE W. BUSH

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Appendix 4



For Immediate Release
Office of the Press Secretary
June 5, 2003

Presidential Memo on Spectrum Policy

Memorandum for the Heads of Executive Departments and Agencies

Subject: Spectrum Policy for the 21st Century

The radio frequency spectrum is a vital and limited national resource. Spectrum contributes to significant technological innovation, job creation, and economic growth, and it enables military operations, communications among first responders to natural disasters and terrorist attacks, and scientific discovery.

Recent years have witnessed an explosion of spectrum-based technologies and uses of wireless voice and data communications systems by businesses, consumers, and Government. Today there are over 140 million wireless phone customers and, increasingly, businesses and consumers are installing systems that use unlicensed spectrum to allow wireless data, called Wireless Fidelity (WiFi), on their premises. The Federal Government makes extensive use of spectrum for radars, communications, geolocation/navigation, space operations, and other national and homeland security needs. We must unlock the economic value and entrepreneurial potential of U.S. spectrum assets while ensuring that sufficient spectrum is available to support critical Government functions.

The existing legal and policy framework for spectrum management has not kept pace with the dramatic changes in technology and spectrum use. Under the existing framework, the Government generally reviews every change in spectrum use, a process that is often slow and inflexible, and can discourage the introduction of new technology. Some spectrum users, including Government agencies, maintain that the existing spectrum process is insufficiently responsive to the need to protect current critical uses.

My Administration is committed to promoting the development and implementation of a U.S. spectrum policy for the 21st century that will: (a) foster economic growth; (b) ensure our national and homeland security; (c) maintain U.S. global leadership in communications technology development and services; and (d) satisfy other vital U.S. needs in areas such as public safety, scientific research, Federal transportation infrastructure, and law enforcement. My Administration has already proposed several legislative changes or program initiatives to improve elements of the spectrum management process. These proposals would greatly enhance the Government's ability to efficiently manage spectrum. To further promote the development and implementation of a U.S. spectrum policy for the 21st century, I hereby direct the following:

Section 1. Establishment. There is established the "Spectrum Policy Initiative" (the "Initiative") that shall consist of activities to develop recommendations for improving spectrum management policies and procedures for the Federal Government and to address State, local, and private spectrum use. The Secretary of Commerce shall chair and direct the work of the Initiative. The Initiative shall consist of two courses of spectrum-related activity: (a) an interagency task force that is created by section 3 of this memorandum; and (b) a series of public meetings consistent with section 4 of this memorandum. The interagency task force and the public meetings shall be

convened under the auspices of the Department of Commerce and used by the Department to develop spectrum management reform proposals.

Sec. 2. Mission and Goals. The Initiative shall undertake a comprehensive review of spectrum management policies (including any relevant recommendations and findings of the study conducted pursuant to section 214 of the E-Government Act of 2002) with the objective of identifying recommendations for revising policies and procedures to promote more efficient and beneficial use of spectrum without harmful interference to critical incumbent users. The Department of Commerce shall prepare legislative and other recommendations to:

- (a) facilitate a modernized and improved spectrum management system;
- (b) facilitate policy changes to create incentives for more efficient and beneficial use of spectrum and to provide a higher degree of predictability and certainty in the spectrum management process as it applies to incumbent users;
- (c) develop policy tools to streamline the deployment of new and expanded services and technologies, while preserving national security, homeland security, and public safety, and encouraging scientific research; and
- (d) develop means to address the critical spectrum needs of national security, homeland security, public safety, Federal transportation infrastructure, and science.

Sec. 3. Federal Government Spectrum Task Force. There is hereby established the Federal Government Spectrum Task Force (the "Task Force") to focus on improving spectrum management policies and procedures to stimulate more efficient and beneficial use of Government spectrum. The Secretary of Commerce, or the Secretary's designee under this section, shall serve as Chairman of the Task Force.

(a) Membership of the Task Force. The Task Force shall consist exclusively of the heads of the executive branch departments, agencies, and offices listed below:

- (1) the Department of State;
- (2) the Department of the Treasury;
- (3) the Department of Defense;
- (4) the Department of Justice;
- (5) the Department of the Interior;
- (6) the Department of Agriculture;
- (7) the Department of Commerce;
- (8) the Department of Transportation;
- (9) the Department of Energy;
- (10) the Department of Homeland Security;

(11) the National Aeronautics and Space Administration;

(12) the Office of Management and Budget;

(13) the Office of Science and Technology Policy;

(14) such other executive branch departments, agencies, or offices as the Chairman of the Task Force may designate; and

(15) subject to the authority of the Director of the Office of Management and Budget, the Office of Project SAFECOM.

A member of the Task Force may designate, to perform the Task Force functions of the member, any person who is a part of the member's department, agency, or office, and who is a full-time officer or employee of the Federal Government.

(b) Functions of the Task Force. The functions of the Task Force are advisory and shall include, but are not limited to, producing a detailed set of recommendations for improving spectrum management policies and procedures to stimulate more efficient and beneficial use of spectrum by the Federal Government. The recommendations shall be consistent with the objectives set out in section 2 of this memorandum. The Task Force may hold meetings to obtain information and advice concerning spectrum policy from individuals in a manner that seeks their individual advice and does not involve collective judgment or consensus advice or deliberation. At the direction of the Chairman, the Task Force may establish subgroups consisting exclusively of Task Force members or their designees under this section, as appropriate.

Sec. 4. Recommendations to Address State, Local, and Private Spectrum Use. Consistent with the objectives set out in section 2 of this memorandum, the Department of Commerce, separately from the Task Force process, shall, in accordance with applicable law, conduct public meetings that will assist with that Departments development of a detailed set of recommendations for improving policies and procedures for use of spectrum by State and local governments and the private sector, as well as the spectrum management process as a whole. These meetings will involve public events to provide an opportunity for the input of the communications industry and other interested parties. Participants may include spectrum users, wireless equipment vendors, financial and industry analysts, economists, technologists, and consumer groups. Interested Federal, State,

and local government agencies will be welcome to attend and participate. The Federal Communications Commission is also encouraged to participate in these activities and to provide input to the National Telecommunications and Information Administration at the Department of Commerce on these issues.

Sec. 5. Reports. The Secretary of Commerce, or the Secretary's designee, shall present to me, through the Assistant to the President for Economic Policy and Director of the National Economic Council and the Assistant to the President for National Security Affairs, in consultation with the Assistant to the President for Homeland Security, two separate reports no later than 1 year from the date of this memorandum, one of which shall contain recommendations developed under section 3 of this memorandum by the Task Force and the other containing recommendations developed under section 4.

Sec. 6. General Provisions.

(a) The heads of Federal Government departments and agencies shall assist the Chairman of the Task Force established by section 3 and provide information to the Task Force consistent with applicable law as may be necessary to carry out the functions of the Task Force. Each Federal department and agency shall bear its own expense for participating in the Task Force. To the extent permitted by law and within existing appropriations, the Department of Commerce shall provide funding and administrative support for the Task Force.

(b) Nothing in this memorandum shall be construed to impair or otherwise affect the functions of the Director of the Office of Management and Budget relating to budget, administrative, or legislative proposals.

Sec. 7. Judicial Review. This memorandum is intended only to improve the internal management of the Federal Government and is not intended to, and does not, create any right or benefit, substantive or procedural, enforceable at law or equity by a party against the United States, its departments, agencies, instrumentalities or entities, its officers or employees, or any other person. Sec. 8. Publication. The Secretary of Commerce is authorized and directed to publish this memorandum in the Federal Register.

GEORGE W. BUSH

Appendix 5

Description of Projects (based on Recommendations in the two reports)

PROJECT A: Improve Stakeholder Participation and Maintain High Qualifications of Spectrum Managers

NTIA will increase the participation of stakeholders in the resolution of spectrum management issues and strategic spectrum planning and will address human resource needs for effective spectrum management.

Task A.1 – Establish a Commerce Spectrum Management Advisory Committee (CSMAC) : Chartered May 2005. In 2007 CSMAC provided advice on NTIA’s proposed Spectrum Sharing Test-Bed; in 2008 CSMAC provided advice through a report on “Opportunities for Government Adoption of Commercial Technologies”; in 2008 the CSMAC is developing advice on streamlining Federal/non-Federal sharing; improving the process of identifying potential spectrum for future reallocation; the transition of Federal Land Mobile Radio Systems to increase spectrum efficiency; implementation of OMB Circular A-11 re consideration of value in the development of major new spectrum systems; and a report recommending the adoption of Administered Incentive Pricing for Federal Spectrum.

Task A.2 – Establish a High Level Interagency Advisory Group - the Policy and Plans Steering Group (PPSG): *Established January 2005.*

Task A.3 – Resolve Inter-governmental Spectrum Disputes Through the Existing White House Policy Coordinating Committee (PCC) Process and Revise the NTIA/FCC Memorandum of Understanding (MOU) to Provide an Additional Minimum 15 Business Days to Accommodate the PCC Process

Task A.4 – Expand the Role of the FCC Defense Commissioner: *To be completed by April 2009.*

Task A.5 – Promote a Career Development Program and Spectrum Management Training

PROJECT B: Reduce International Barriers to U.S. Innovations in Technologies and Services

NTIA will evaluate and make recommendations for spectrum policies regarding the potential for reducing global barriers affecting implementation of new U.S. telecommunications technologies internationally. NTIA will also examine the issue of how the U.S. can balance the costs and benefits of globalization and harmonization of spectrum use and interoperability in a flexible manner.

Task B.1 – Improve U.S. Preparations for World Radiocommunication

Conferences: *Report completed May 2005.*

Task B.2 – Improve International Spectrum Management Policies and Regulatory Environment:

Report completed April 2008.

PROJECT C: Modernize Federal Spectrum Management Processes with Advanced Information Technology

NTIA will employ IT to satisfy the needs of NTIA and the federal agencies for effective and efficient processes that permit agencies to obtain timely wireless system authorizations. Application of IT tools will also facilitate the sharing of spectrum between the public and private sectors by streamlining the NTIA and FCC coordination process.

Task C.1 – Implement Advanced Information Management Systems:

Federal Spectrum Management System to be implemented by 2014.

PROJECT D: Satisfy Public Safety Communication Needs and Ensure Interoperability

In the Executive Memorandum, the President directed the Department of Homeland Security (DHS), in consultation with the Department of Commerce and other agencies, to identify public safety spectrum requirements, and to develop a comprehensive Spectrum Needs Plan to address spectrum issues related to the public safety community, as well as the continuity of government operations.¹ DHS and NTIA have determined that to respond to this directive, DHS will have several responsibilities for identifying and addressing the spectrum requirements of the public safety community, and will develop a comprehensive plan to address public safety spectrum needs, interference, technology, and security issues.²

NTIA, with the assistance of the federal agencies and the FCC, will examine the

¹ Executive Memorandum, *supra* Appendix 4, at Sec. 2(c). See also, National Telecommunications and Information Administration, U.S. Department of Commerce, *Spectrum Policy for the 21st Century – The President’s Spectrum Policy Initiative: Report 2* (2004) (Recommendations from State and Local Governments and Private Sector Responders -Report 2), available at http://www.ntia.doc.gov/reports/specpolini/presspecpolini_report2_06242004.htm. This report contains a detailed description of the analyses and assessments that DHS will perform to identify and address unsatisfied spectrum requirements for public safety.

² See Report 2, Recommendation 9(c), at 27.

feasibility of sharing spectrum among commercial, federal and local public safety, and critical infrastructure applications through a public safety demonstration program. This task will require close liaison with and support of DHS.

Task D.1 – Spectrum Sharing Between Federal and Non-federal Public Safety Agencies: *Completed report June 2007.*

PROJECT E: Enhance Spectrum Engineering and Analytical Tools

NTIA will conduct a comprehensive review of existing federal agencies' spectrum use for the purpose of improving efficiency; promote selected best practices in spectrum engineering; establish a pilot program to examine the potential impact of new technologies and spectrum uses; and develop modern analytic tools and promote their use by U.S. spectrum managers.

Task E.1 – Develop Analytic Approaches, Software Tools, and Engineering Techniques for Evaluating and Improving the Efficiency and Effectiveness of Federal Spectrum Use: *To be completed by September 2010.*

Task E.2 – Develop and Promote Recognition in the Spectrum Management Community for Best Practices in Spectrum Engineering: *To be completed by December 2010.*

Task E.3 – Conduct a Pilot Program to Evaluate Approaches and Techniques to Increase Spectrum Sharing Between Federal and Non-federal Spectrum Users: *Test Bed tests and annual report to be completed by December 2008. Follow-on recommendations to be completed by December 2009.*

Task E.4 – Develop and Promote the Use of Modern Analytic Tools for Spectrum Engineering: *Catalog will be updated on an on-going basis.*

PROJECT F: Promote Efficient and Effective Use of Spectrum

Report 1 stressed that agencies should implement policies and procedures to evaluate their proposed needs for use of the spectrum before seeking spectrum certification from NTIA for new or improved radio systems, considering approaches that may use less spectrum or commercial services to meet their requirements.³ NTIA will develop a standard format for agencies to summarize these analyses, and review these analyses within its certification of spectrum support process.

Task F.1 – Improve the Technical Planning Process

³ See, National Telecommunications and Information Administration, U.S. Department of Commerce, *Spectrum Policy for the 21st Century – The President's Spectrum Policy Initiative: Report 1*, (2004) (Recommendations of the Federal Government Spectrum Task Force -Report 1), available at http://www.ntia.doc.gov/reports/specpolini/presspecpolini_report1_06242004.htm at 22.

NTIA will work with federal agencies to develop a standard format for summarizing the analyses and assessments performed by the federal agencies to support the selection of spectrum dependent systems, and a process for reviewing these analyses.

PROJECT G: Improve Planning and Promote Use of Market-Based Economic Mechanisms in Spectrum Management

NTIA will promote improved long-term spectrum planning and the implementation of spectrum efficiency incentives, where appropriate. NTIA will improve the federal government's long-range spectrum planning processes, support the Office of Management and Budget (OMB) in improving the consideration of spectrum as a resource when procuring spectrum-dependent systems, and develop a plan to identify and implement incentives to improve the efficiency of both government and private sector spectrum use.

Task G.1 – Improve the Processes for Federal Agencies' Spectrum Planning and Produce a National Spectrum Plan: *Federal Strategic Spectrum Plan completed March 2008; Development of a National Strategic Spectrum Plan is on-going.*

Task G.2 – Improve Federal Agencies' Processes and Procedures to Better Consider the Economic Value of Spectrum When Investing in Spectrum-Dependent Systems: *OMB portion completed at the end of November 2004; Guidance to Federal agencies on compliance with Section 33.4 of Section 300 of Circular A-11 to be completed June 2009; Integration of Spectrum Management Decision-making into Agency Capital Planning and Strategic Planning Activities is on-going with Federal Agencies.*

Task G.3 – Develop a Plan to Identify and Implement Incentives for Improving Efficiency in Federal Agencies' Spectrum Use: *NTIA forwarded its "Plan to Identify and Implement Incentives That Promote More Efficient and Effective Use of Spectrum" to the White House in March, 2006; conducted a workshop on "Improving Spectrum Management through Economic or Other Incentives at the National Academy of Sciences in February, 2006; and completed an internal review of international best practices in 2006.*

Task G.4 – Promote the Implementation of a Wide Range of Incentives to Improve the Efficiencies of Both Government and Private Sector Spectrum Use: *NTIA plans to complete a contract or MOU with an outside organization to develop a unit of consumption for and a methodology to estimate the value of spectrum used by the Federal Government (OPAD lead with support from OSM); revise the structure of administrative cost-recovery fees; propose for consideration a spectrum use fee based on spectrum use/value and consider drafting proposed legislation to implement such a fee; to complete a case study on 5 GHz sharing and specific proposals to increase sharing through new technologies and techniques for dynamic spectrum sharing; and to complete a study of the rights afforded to federal spectrum users and proposals to give Federal agencies broader authority to use radio spectrum.*