

DEVELOPING POLICIES IN SPECTRUM MANAGEMENT FOR THE 21ST CENTURY

A United States Initiative

Presented to the National Research Council Committee on Radio Frequencies

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multi-phase program

- **Funding**: Initiated in Spring of 2003
- **Administration Commitment**: Executive Memorandum signed on May 29, 2004, and Released on June 5, 2003
- **Scope**: Comprehensive review and systematic reform of radio frequency spectrum management policies affecting the United States' domestic and international uses of the spectrum

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objectives

- Overhaul and rebuild the international and domestic radio frequency spectrum management processes to be more responsive, effective, and efficient
- Foster economic growth
- Ensure security - domestic and global
- Maintain U.S. global leadership in communications technology development and services, and
- Satisfy vital U.S. needs in areas such as public safety, scientific research, Federal transportation infrastructure, and law enforcement

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"policy" defined

- Classic View: A "policy" is only needed to implement changes
- Practical View: Anything that provides guidance including the provisions of: constitution, treaties, laws, regulations, agreements, processes, procedures, understandings...
- Some Draw Distinctions: Policies vs. Instruments that implement policies

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recommendations sought

- **Identify critical spectrum requirements** of the United States, including those for national and homeland security, public safety, Federal transportation, and science;
- **Modernize and improve the spectrum management system** used by the United States in satisfying requirements for domestic and international uses of the spectrum;
- **Create incentives** for achieving more effective, efficient, and beneficial use of the spectrum, and for providing a higher degree of predictability and certainty in incumbents' rights for continued use of the spectrum; and
- **Improve the implementation of new and expanded radiocommunication services and technologies** while avoiding unacceptable interference to incumbent spectrum users including those performing national and homeland security, public safety, and scientific research functions

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workplan

Executive Memorandum Directs the Secretary of Commerce—

- to establish a Federal Government Spectrum Task Force to address Federal agencies' use of the spectrum
- to convene public meetings to seek the views of a wide range of stakeholders regarding policy reforms needed to improve United States spectrum use as a whole
- to prepare reports on both of the above activities and submit them to the President by May 29, 2004

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the task force

- Comprised of Representatives from State, Treasury, DoD, Justice, Interior, Agriculture, Commerce, Transportation, Energy, DHS, NASA, OMB, OSTP, FCC, and OMB's Project SAFECOM
- Task Force met first on July 10, 2003, and the 5th meeting is scheduled for March 11, 2004
- A Working Level Group was formed and has been meeting about every two weeks since July

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the public meetings

- **NTIA Forum in DC:** December 9, 2003, Public Forum on Spectrum Policy Reforms to Improve Spectrum Efficiency and Deployment of New Technologies/Services
- **NTIA Forum in DC:** February 10-11, 2004, Spectrum Policy Reforms to Improve Public Safety Operations
- **NAS/NTIA Forum in DC:** February 12-13, 2004, Spectrum Policy Reforms to Improve United States Use of the Spectrum as a Whole
- **Industry Forum in Santa Clara, California:** March 8, 2004, Spectrum Policy Reforms to obtain comments from service providers, entrepreneurs, and venture capitalists for improving deployment of new technologies and services

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NTIA's Notice of Inquiry

- Released on February 2, 2004, in the Federal Register
- Seeks comments on policies affecting the ability of the United States to satisfy its domestic and international requirements for using the spectrum
- Nineteen Comments received and posted at <http://spectrumreform.ntia/doc.gov>

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key terms

EFFECTIVE

EFFICIENT

BENEFICIAL

CRITICAL

HARMFUL INTERFERENCE

ACCEPTABLE INTERFERENCE

SPECTRUM VALUE

OPPORTUNITY COSTS

INVESTMENTS IN SPECTRUM DEPENDENT SYSTEMS

FUNCTIONAL REQUIREMENTS

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structuring the issues

- **What are the United States' critical requirements for spectrum use?**
(domestic, international, Federal Agency, State, Local, Indian Tribal Government, commercial, individual consumer)
- **What are the elements of the spectrum management system used by the United States?**
(within the agencies, within industry, within the States, within the United States, within the Americas, globally)
- **What approaches could be used to improve spectrum use?**
(long-range planning, market based incentives, nothing)

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elements of a spectrum management issue

Technical
Regulatory
Economic
Statutory
Political
Diplomatic

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some issues for consideration

- Long-range Planning
(Federal agencies, States, Industry)
- Economic/Business Impact
(consequence of proposed reforms)
- Large Scale Operational Testing
(certification of measurement Labs)
- National Trials
(shared spectrum, leased services)

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a vision for spectrum policy

- **Federal, State, and local agencies have access to spectrum to effectively accomplish the critical functions of their statutorily mandated missions**
- **Both large and small elements of industry have access to spectrum to develop innovative technologies and services**
- **Development agencies in both Government and industry have access to certified laboratories for reliable measurements and analyses of the likely interference problems caused by new products and services**

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a vision for spectrum policy (continued)

- Effective spectrum use and the timely deployment of new products and services beneficial to society are recognized as promoting jobs and economic growth
- Regulations have been established that permit effectively utilizing the capabilities of new beneficial products and services
- The Federal Government exercises its extensive role as a purchaser of goods and services to establish markets for new and beneficial products and services

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a vision for spectrum policy (continued)

- Competition among suppliers of spectrum dependent products and services is recognized as resulting in benefits to the consumer

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A watch list of coming events

- Department of Commerce Report to the President - spectrum policy reform – June 2004
- Meeting of the ITU Council – June 2004
- ITU Plenipotentiary Conference - 2006
- Continuing activities of the Joint ITU R/D Sectors' Resolution 9 Working group

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ITU Council Issues

- Review of the Budget (2004 – 2005)
 - Resources for the Study Groups
 - Preparation for World Summit on Information Society (Phase 2)
- Review of Financial Consultant's Report
 - Application of Cost Recovery
 - Develop an activities based structure for the budget
- Develop Proposals for Possible Structural Reforms of the Union

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ITU 2006 Plenipotentiary Conference

- To Address the Financial Condition of the Union
- To Review the Role and Function of the World Radiocommunication Conference in the Union's treaty development process

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ITU-Joint R/D Resolution 9 Work Group

- World Telecommunication Development Conference (1998) and (2002)
- ITU Development Sector (D) sought spectrum management assistance from the Radiocommunication Sector (R)
- Phase 1 (27.5-960 MHz) http://www.itu.int/ITU-D/study_groups/SGP_1998-2002/JGRES09/Res9_Index.html
- Phase 2 (960-3000 MHz) http://www.itu.int/ITU-D/study_groups/SGP_2002-2006/JGRES09/Res9_Index.html

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(still evolving)