

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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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)