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Recent Spectrum Developments

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NSMA

Spectrum Management 2010

May 18, 2010

Outline

- Spectrum Policymakers
- National Broadband Plan
- Spectrum Bands in Play
- Other Hot Topics
- The Look Ahead

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Spectrum Policymakers

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Spectrum Policymakers

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- NTIA
 - Lawrence Strickling
- RUS
 - Jonathan Adelstein
- White House, OSTP
 - John Holdren
- State Department
 - Phil Verveer
- Congress
 - Rep. Henry Waxman
 - Sen. Jay Rockefeller



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Spectrum Policymakers:

NTIA Commercial Spectrum Management Advisory Committee

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- Adjacent Band/Dynamic Spectrum Access
- Spectrum Incentives
- Spectrum Inventory
- Spectrum Transparency
- Spectrum Sharing (new)
- Unlicensed Spectrum (new)
- Next meeting: May 19, 2010

Spectrum Policymakers: FCC



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- Chairman
 - Julius Genachowski (D) (June 2013)
- Commissioners
 - Michael J. Copps (D) (June 2010)
 - Robert M. McDowell (R) (June 2014)
 - Mignon Clyburn (D) (June 2012)
 - Meredith Attwell Baker (R) (June 2011)

Spectrum Policymakers: FCC

- Ruth Milkman, Chief, Wireless Bureau
- James Barnett, Chief, Public Safety and Homeland Security Bureau
- Mindel De La Torre, Chief, International Bureau
- Julius Knapp, Chief, Office of Engineering and Technology
- Austin Schlick, General Counsel



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The Genachowski FCC

- National Broadband Plan – Roadmap for Action
- Agency Reform
 - Modernization – FCC Web Tools
 - Outreach - Use of Social Media
 - Decision-making - Data-driven policies
 - Process - Ex Parte, Procedural Reforms

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The National Broadband Plan

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National Broadband Plan

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- Released on March 16, 2010
- 360 Pages
- Over 60 Rulemakings in 2010
- 208 Total Recommendations
 - Over 40 Recommendations to Congress
 - Over 90 Recommendations to Federal Agencies and the Administration
 - Over 10 recommendations to States

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National Broadband Plan

- Spectrum for Broadband
 - **Goal:**
 - 10 Years: 500 MHz for broadband
 - 5 Years: 300 MHz between 225 MHz – 3.7 GHz

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National Broadband Plan

- Spectrum Transparency
 - Spectrum Dashboard
 - FCC and NTIA should create methods for measurement of spectrum utilization
 - FCC should maintain an ongoing strategic spectrum plan, including triennial assessment of spectrum allocations



National Broadband Plan

- Spectrum Reallocation
 - Congress should expand FCC authority to allow for incentive auctions
 - Congress should build upon success of CSEA to facilitate relocation
 - Congress should grant authority to FCC and NTIA to impose spectrum fees
 - FCC should evaluate secondary markets policies and rules

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National Broadband Plan

- Spectrum Flexibility
 - Revise Parts 74, 78, 101 to allow for increased spectrum sharing among point to point microwave services
 - Revise rules to allow for greater flexibility to deploy backhaul

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National Broadband Plan

- Spectrum Access – Alternatives to Licensed
 - Within 10 years, free up a contiguous, nationwide band for unlicensed
 - Spur development of opportunistic devices
 - Initiate proceedings to enhance R&D to enhance spectrum access

TV Bands

- NBP: FCC should initiate rulemaking proceeding to reallocate 120 MHz from the broadcast television bands
 - Update TV service areas and distance separations and revise Table of Allocations; Establish licensing framework to permit sharing
- Congressional action needed to provide FCC with incentive auction authority
- Politically-charged issue
- NPRM expected 3Q 2010

AWS-2 and 3

- AWS-2: 1915-1920 MHz, 1995-2000 MHz, 2020-2025 MHz and 2175-2180 MHz
- AWS-3: 2155-2175 MHz
- National Broadband Plan recommendations:
 - By Oct. 1, 2010, NTIA/FCC, should analyze possibility of reallocating portion of 1755-1850 MHz band to pair with AWS-3 band
 - By end 2010, FCC should adopt order to make 60 MHz from AWS bands available for broadband including, if possible, 20 MHz from federal allocations for broadband
 - By end 2011, auction should occur
 - By end 2011, if NTIA determines there is not strong possibility of reallocating federal spectrum to pair with AWS-3, FCC should auction AWS-3 on a stand-alone basis

D Block

- By the end of 2010, the FCC will issue an order to make 10 MHz in the Upper 700 MHz D block available for commercial use that is compatible with public safety broadband services for broadband
- Congress may still reallocate D Block to public safety
 - Supported by Public Safety, AT&T, Verizon, Motorola, Harris Corp., Alcatel Lucent
- Open questions – roaming and priority access?
- Order/NPRM expected 2Q/3Q 2010

Other Bands



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- Mobile Satellite Service (“MSS”): NBP recommends FCC accelerate terrestrial deployments in MSS spectrum.
 - NPRM expected 3Q 2010
- Wireless Communications Service (“WCS”): NBP recommends FCC revise technical rules, including the WCS OOB limits, to enable mobile broadband use of the 2.3 GHz WCS spectrum, while protecting federal, non-federal AMT and satellite radio operations in the neighboring SDARS band.
 - Order being voted on at May 18 FCC Open Meeting
- White Spaces: NBP recommends FCC expeditiously move to close TV white spaces proceeding
 - Order expected 3Q 2010

Other Hot Topics

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Competition Policy

- Return of More Aggressive Market Regulation?
 - Current “competitive screen” is 95 MHz
 - Triggers in-depth analysis for markets where exceeded, but does not preclude owning more than 95 MHz
 - Spectrum Cap:
 - RTG Petition for Rulemaking (2008)
 - 110 MHz cap below 2.3 GHz
 - Other flavors
 - Incumbent eligibility restrictions
 - All spectrum in an auction
 - Some bands or % of spectrum in an auction
 - “Foreclosure Value” tax on incumbent bids
 - Bids are discounted for purposes of determining who wins, not how much they pay
 - Skyterra Order
 - Imposes new procedures on Verizon and AT&T in merger review context

Buildout

- Overall trend towards more aggressive buildout – 700 MHz, etc.
- Proposed WCS Buildout Requirements (to be addressed in WCS Order):

<p><u>Point to multipoint</u> MEAs/REAGs</p> <p>Alternatively, buildout by both licensed area (above) and the defined market areas that make up the license area (i.e., by EA for MEAs; by MEA for REAGs)</p>	<ul style="list-style-type: none"> • Reliable signal coverage to • 30 months – 40% of a license area’s population • 60 months – 75% of a license area’s population <p>or</p> <ul style="list-style-type: none"> • 30 months – 40% of a license area’s population and 25% of each defined market area’s population • 60 months – 50% of each defined market’s population and 75% of a license area’s population.
<p><u>Point to point</u></p>	<ul style="list-style-type: none"> • Construction and operation of links: • 30 months – 15 per million persons in a license area • 60 months - 30 per million persons in a license area • Minimum payload capacity (Mbps) to ensure intensive spectrum use • Minimum number of links in each defined market area
	<ul style="list-style-type: none"> • Possibility of automatic termination of licenses for failure to meet performance requirements

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Spectrum Inventory

- Inventory of Spectrum Use?
 - Spectrum Inventory Legislation
 - Passed the House; still pending in the Senate
 - Commercial (FCC)
 - Federal (NTIA)
 - Other Developments:
 - Mar. 2010: FCC Spectrum Dashboard Beta Launch
 - Apr. 2010: Spectrum Task Force Announced
 - Beginning in Fall 2010: Consolidated Licensing System

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Infrastructure

- The NBP outlined several recommendations to improve the utilization of infrastructure:
 - Pole attachment rates
 - Pole attachment “make-ready” process
 - Infrastructure access dispute process
 - Collection/availability of location information of poles ducts, conduits and rights-of-way
 - Pole Attachment Order and FNPRM on May 18, 2010 Open Meeting
- **Migratory Bird MOU**

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Roaming

- April 2010 Open Meeting – Order and Further Notice of Proposed Rulemaking
 - Order: Eliminates home roaming exclusion; carriers must provide push-to-talk upon request; outlines process for dispute resolution
 - Further Notice of Proposed Rulemaking: Extend roaming to data services? FCC authority?

FCC Authority

- FCC's "Third Way" Approach
 - Impose Sections 201, 202, 208, 222, 254, and 255 of the Act to broadband transmission component and forbear from imposing other sections of Title II
 - Schlick: Wireless broadband "may be distinguishable" from wired broadband access services

Net Neutrality

- Jan. 2010 NPRM:
 - Proposed codification of the FCC's *Internet Policy Statement* plus nondiscrimination and reasonable network management disclosure principles
 - Open question - Will it apply to wireless?

The Look Ahead

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The Look Ahead:

National Broadband Plan Timeline

- **2010:** Over 60 items on FCC Broadband Action Agenda
- **2011:** Auction AWS-2/-3 spectrum, upper 700 MHz D block for commercial use; adopt order to accelerate terrestrial deployment in S-Band of MSS spectrum for broadband
- **2012/13:** Auction broadcast TV spectrum for broadband
- **2020:** Eliminate High Cost USF program and migrate all support to Connect America Fund; 100M US homes should have affordable access to 100 mbps (down) / 50 mbps (up)

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