

CSMAC
Spectrum Efficiency Subcommittee

July 24, 2018

Subcommittee Members

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Improving Spectrum Efficiency

1. Complete outreach and finalize recommendations on regulatory, procedural, legislative or policy actions to improve efficiency without harming effectiveness.
Carolyn Kahn – Lead
2. Identify mechanisms that could be employed to increase spectrum efficiency via sharing options, such as a federal mechanism to monetize assets on a non-permanent basis (e.g., a secondary markets model)?
Bryan Tramont – Lead

Department and Agency Interviews

- Federal agency interviews conducted
 - OMB
 - NTIA ITS
 - DHS
 - DoD
 - FAA
 - NOAA
 - DOJ
 - NASA

Barriers to Implementing Spectrum Efficiency Mechanisms

- Legal
- Structural
- Information
- Other

Legal Barriers

- Miscellaneous Receipts Act
- Antideficiency Act
- Scope and Funding Mechanism for the Spectrum Relocation Fund (SRF)
- Congressional Appropriations Process

Structural Barriers

- Lack of NTIA Authority and Resources
- General Staffing and Resource Shortages
- Additional Administrative Burdens Created by Implementing New Economic Mechanisms

Information Barriers

- Lack of Updated, Comprehensive Data Regarding Federal Spectrum Use
- Complexities In Quantifying A Monetary Or Economic Value For Federal Spectrum Assets

Other Barriers

- High Transaction Costs
- Lack of Trust in Technology And Regulatory Interference Resolution Processes

Most Promising Mechanisms

- Funding
 - Create predictable and flexible funding to support the development and implementation of sharing options (in particular, explore whether further changes to the Spectrum Relocation Fund are warranted).
- Spectrum Property Rights
 - Grant agencies spectrum ownership and flexible use rights to enable the sale, lease, subdivision, etc. of spectrum use rights.
- Bi-Directional Spectrum Exchanges or Barter/Swaps
 - Permit federal and commercial users to negotiate directly to trade licenses or to exchange spectrum use rights for equipment upgrades.
- Expansion of NTIA Authority and Resources
 - Expand NTIA authority and resources to provide additional tools to support collaborative spectrum use and the management of federal spectrum.

Promising Mechanisms

- **Overlay Rights**
 - Grant overlay rights either (1) with a specific relocation date as a path to expedite relocation or sharing, or (2) without any mandatory relocation date to allow the market to determine the pace.
- **Spectrum Scoring Reform**
 - Have the Congressional Budget Office score efficiency improvements to promote sharing or reallocation.
- **Dynamic Federal Spectrum Secondary Markets**
 - Allow shared access to federal spectrum through short-term leases, such as via real-time auction.
- **Auction Revenue**
 - Allow government spectrum users to retain some net auction revenue for spectrum made available for sharing or reallocation as a result of efficiency improvements.

Other Mechanisms

- Spectrum Auditor
 - Utilize spectrum efficiency metrics to compare procurement options or broad-based reassessment of spectrum to encourage reallocation, swaps, leasing, or sharing.
- Spectrum Use/Rental Fees
 - Charge agencies fees related to the market value of their spectrum.
- Shared-Use Spectrum Superhighways, Spectrum Currency, and Spectrum Efficiency Fund
 - Establish spectrum superhighways and encourage agency participation through Spectrum Currency and a Spectrum Efficiency Fund.
- Defense Base Closure and Realignment (BRAC) Model
 - Direct a broad-based reallocation of spectrum leading to relinquishment or sharing of federal bands for commercial purposes using BRAC approach.

Recommendations to NTIA

- NTIA should focus on exploring the most promising mechanisms – including through the use of test beds.
- NTIA should work with Congress and the Administration to explore ways to reduce the barriers to more efficient federal spectrum use, in a way that does not impact mission effectiveness.
- In the context of its development of a national spectrum strategy, NTIA should include the development of a set of guiding principles to focus on spectrum efficiency.

Recommendations to NTIA (cont.)

- Once the spectrum efficiency guidelines and larger strategy are developed, NTIA should consider working with the FAR Council/OMB on requiring spectrum efficiency factors in RFPs, through the Federal Acquisition Regulations (FARs), with the departments then able to implement according to their own particular missions.
- NTIA should continue a constructive two-way dialogue with agencies to address, plan, and implement increased spectrum efficiency collaboratively and strategically, while meeting mission objectives.
- NTIA should consider the findings in the report as it works with the FCC, OMB, and the affected federal agencies to develop a report to Congress with recommendations that could incentivize federal entities to improve efficiency.