



CSMAC Working Group 1

Report on the Presidential Memorandum on Developing a Sustainable Spectrum Strategy for America's Future: Governance

January 28, 2020



Working Group 1 Mandate

- **What should be the United States implementation structure or governance model for the National Spectrum Strategy (NSpcS)? Consider whether the US spectrum management approach is optimized for the implementation of a 21st century national spectrum strategy, and if not, whether there is value in establishing a new approach or structure to accomplish this. If there is value in a new approach or structure, what are its characteristics? (Recommendations are due in 3–4 months)**
 - If the Commerce Spectrum Management Advisory Committee (CSMAC) concludes that there is utility in revising the US spectrum management approach, consider what structural changes, new entities, roles, responsibilities, and legislation would be required to implement it (Recommendations are due in 6–9 months)

Initial View of Working Group on the Mandate

- **There is general agreement among the working group that our country's current approach for managing the use of spectrum is no longer effectively serving the needs of the entire stakeholder community and would benefit from reform. Moreover, with the increased use of spectrum by all stakeholders, we agree that issues around spectrum sharing and band adjacencies will need to be handled with both speed and skill to ensure that the US is making the most of its critical national resources.**

Status Update

- **Held six meetings since October 10**
- **Reviewed key parts of the existing statutes and regulations to ensure a common understanding of the current environment**
- **Solicited contributions from members on governance ideas, with a goal of developing a reasonable array of available governance model options for consideration**
- **Invited a distinguished guest speaker, Peter Tenhula (NTIA), on IRAC operations**
- **Thanks to Dale Hatfield, tapped into law student researchers who are looking at the history of the present structure**
- **Decided on “operational rules” for this phase of the investigation**
 - In the absence of a final National Spectrum Strategy, put our best ideas forward for improving spectrum governance
 - *Initial* focus on domestic concerns to better manage the conversations and place ideas succinctly on paper – *future* focus to include international aspects.

Six Options Under Review

- **Unranked (ID is for identification only)**

Option ID	Title	Change relative to existing structure
A	New Full-Service Spectrum Agency	New entity; the National Telecommunications and Information Administration (NTIA) and Federal Communications Commission (FCC) divest spectrum and related functions
B	New Unity Agency	New entity in addition to the NTIA and FCC
C	New FCC	The NTIA and FCC remain, but the FCC expands authority
D	New NTIA	The NTIA and FCC remain, but the NTIA expands authority
E	New R&D Forecasting Function	The NTIA and FCC remain as is; may be combined with another approach
F	Enhanced MOU Between FCC and NTIA	The NTIA and FCC statutory responsibilities remain the same, but with enhancement of overarching spectrum MOU

Option A: New Full-Service Spectrum Agency

- **New independent commission-style agency would perform all spectrum policy/management/planning, licensing/authorization, and equipment functions, including sharing and enforcement**
- **Existing spectrum functions that are currently performed by the FCC and NTIA would be divested and assigned to this new entity**
- **The new entity would be responsible to all stakeholders for all types of spectrum**
- **Heavy emphasis on domain knowledge by commissioners and staff**
- **Requires legislative action**

Option B: New Unity Agency

- **New independent commission or independent Executive Branch agency with functions and leadership TBD and under discussion**
 - May or may not be similar to Option A
- **Options for a new unity agency (for further discussion)**
- **Function: Spectrum policy, allocations, planning, or broader functions?**
 - How much of the NTIA and FCC jurisdiction should be transferred to this entity?
- **Structure: Is this a commission-style agency or a new independent Executive Branch agency? Depending on the answer to the agency's function, what is the relationship of the NTIA and FCC to this new entity?**
- **Leadership: Led by Board of Directors/Commissioners or Administrator?**
 - As with Option A, heavy emphasis on domain knowledge
- **Requires legislative action**

Option C: New FCC

- **Consolidate all spectrum policy, management, and planning with respect to Table of Allocations at the FCC**
- **Significant addition to the FCC's existing portfolio**
 - National security: Should the current role of Defense Commissioner be expanded or revised? What additional capacity would the FCC need to manage federal stakeholder issues?
 - Structure: Much of NTIA's current spectrum work would transfer to the FCC. How would these functions be absorbed operationally and managerially?
 - Lead through consensus-building and engineering excellence
- **NTIA: Should there be a residual role for NTIA to act as spectrum IG to ensure that federal stakeholders' needs are being addressed?**
- **Requires legislative action**

Option D: New NTIA

- **Consolidate all spectrum policy, management, and planning with respect to the Table of Allocations at the NTIA and elevate the NTIA within the Department of Commerce structure**
- **Significant addition to NTIA's existing portfolio**
 - Function: What specifically should move from FCC to NTIA?
 - Structure: How would these functions be absorbed operationally and managerially?
 - Transparent administrative processes: Commercial stakeholders are accustomed to a highly transparent FCC process
 - Lead through consensus-building and engineering excellence
- **Leadership: Should the NTIA be elevated within the Commerce structure considering its expanded jurisdiction and importance?
Requires legislative action**

Option E: New R&D Forecasting Function

- **Add a new entity (or federal contract) to perform R&D (sharing of all types, propagation, etc.) and forecasting to inform the FCC and NTIA (or new entity)**
- **The purpose is to develop a common factual basis for decision-making with a focus on technology and demand forecasting and technical issues**
 - Addresses an important gap with respect to medium- and long-term spectrum management—understanding the future of sharing mechanisms, propagation and interference, and developing technology and demand trends
 - Can perform investigations itself, enter into Memorandums of Understanding (MOUs) with other entities, or subcontract
- **Likely to require legislative action**

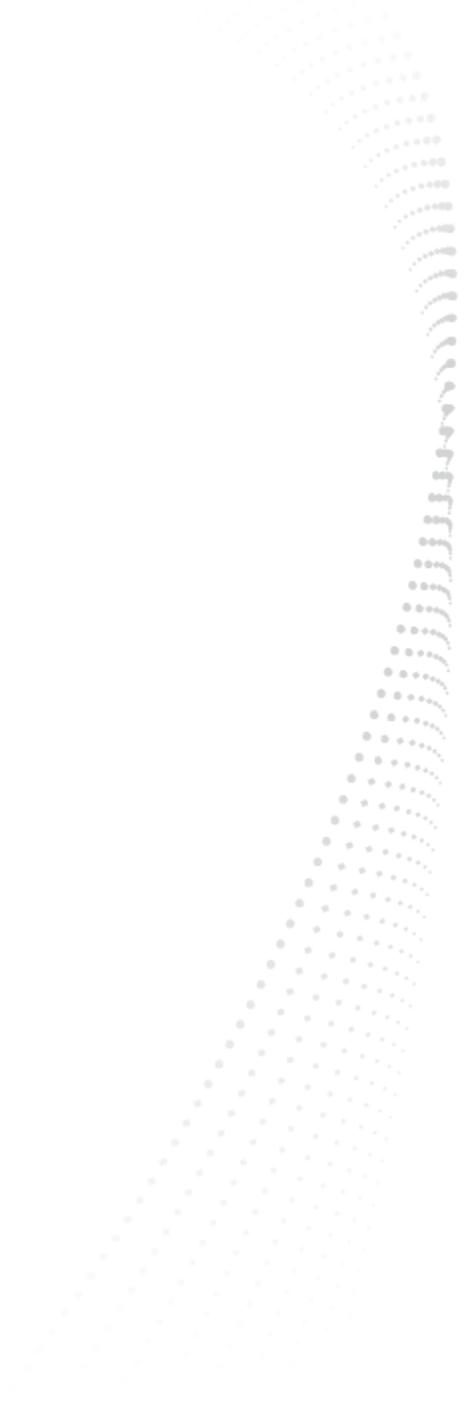
Option F: Enhanced MOU between FCC and NTIA

- **Revise the existing 2003 MOU to expedite decisions and strengthen decision-making capacity**
- **Recommend updating the MOU every 2 years**
- **Routine items to be coordinated in 15-day period, but gaps remain for non-routine items**
- **Enhanced MOU**
 - For non-routine FCC items, include specific time frames for resolution and create an agreed escalation process. Consider, as appropriate, the participation of other interested agencies
 - Formalize the development of a governance structure for implementing the national spectrum strategy; provide guidelines for spectrum management decision making between the two agencies (i.e., how issues will be raised and how conflicts will be resolved)
 - Provide Congress with an annual report on their joint spectrum planning activities, future spectrum requirements, spectrum allocation actions necessary to accommodate those uses, and any actions taken to promote the efficient use of spectrum. Highlight outstanding areas where consensus cannot be found
 - Identify the evaluation and possible implementation of technologies that enhance spectrum utilization and efficiencies and utilize the Spectrum Sharing Innovation Test-Bed for collaborative testing of such technologies
 - Hold a joint workshop annually to discuss spectrum research and coordination activities and explore novel spectrum sharing and management techniques and approaches
 - Develop a common set of metrics to predict potentially harmful interference
 - Create and co-chair a federal advisory committee on spectrum planning and usage composed of both federal and non-federal stakeholders to develop collaboration and planning strategies between federal and non-federal spectrum users and licensees
- **No legislation required**

Next Steps

- **Continue to discuss the six options presented, incorporating CSMAC feedback**
- **Revise options by exploring the following issues for each**
 - What specific frequency allocation, spectrum management, and planning activities are supported?
 - Are there dependencies among functions that need to be taken into consideration?
 - Assess resourcing decisions associated with each proposal
 - What, if any, legislative changes need to be made?
 - Research and development: Which agency, if any, conducts R&D (could include development of sharing systems, whether initiated by the government or the private sector)?
 - Who conducts assignment and licensing (authorization)?
 - Who authorizes sharing systems?
 - Monitoring and compliance with policy: Who enforces what?
 - Standards specification and equipment type approval: Where is this work performed?
 - Who forecasts needs?
 - Who provides global leadership in spectrum policy? Who is involved in international coordination and cooperation?
 - Benefits and drawbacks
 - Lessons from history
 - Lessons from other countries
- **Evaluate work once the National Spectrum Strategy is released for relevance**
- **Provide modifications as needed**

Annex



Governance: Agency History

- **Dale Hatfield solicited two student volunteers to dig up the history of how the US ended up with a bifurcated spectrum governance model**
 - Researchers: Kehinde Winful and Rachel Anderson, University of Colorado Boulder Law - Class of 2022
- **An initial draft has been forwarded for review by the co-chairs and will be reviewed by the subcommittee**

CSMAC Working Group 1 Members

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