



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

CSMAC Working Group 1

April 22, 2020



# Working Group 1 Mandate

- **What should be the United States' implementation structure or governance model for the National Spectrum Strategy (NSpcS)?**
- **Is US spectrum management optimized for the implementation of a 21<sup>st</sup> century national spectrum strategy? If not, is there 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)

# 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**

***—Presented at the January 28, 2020 CSMAC meeting***

# Status of Report

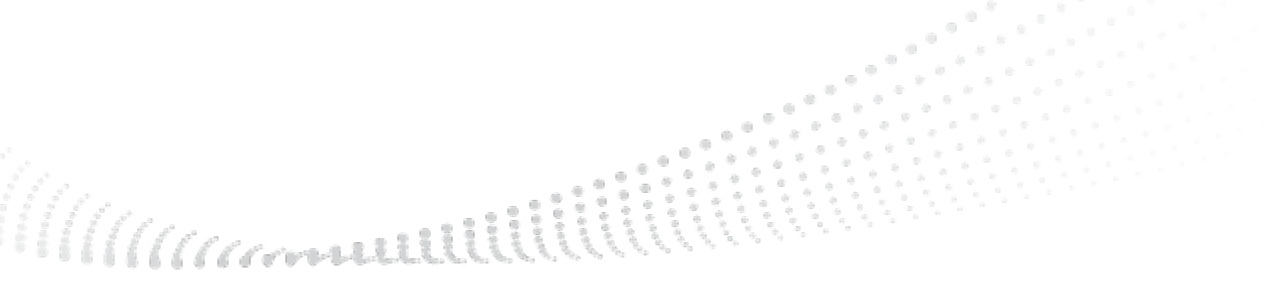
- To date, we have developed several options that reflect Working Group 1 (WG1)'s best thinking on possible spectrum management governance models
- Our goal is to provide a basis for the examination of the best spectrum management governance model to meet the goals of the United States and the still-to-be-released National Spectrum Strategy
- We were unable to locate extensive literature or research on reforming US spectrum management. Therefore, spectrum governance in the United States is largely an issue of the first-hand knowledge of WG1
- WG1 felt it was necessary to explore a range of possible changes, from minor to significant, that would improve the current U.S. spectrum management process
- This review of ideas should provide National telecommunications and Information Administration (NTIA) and others the ability to build on our work. WG1 has not endorsed these or any single option

# Working Methods for WG1

- Held more than 15 meetings
- Reviewed key parts of the existing statutes and regulations to ensure a common understanding of the current environment
- Examined international spectrum management regimes to ascertain lessons learned
- 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
- Researched the history of the present structure thanks to Dale Hatfield and University of Colorado law students
- Decided on operational rules for this phase of the investigation
- Put our best ideas forward for improving spectrum governance in the absence of a final National Spectrum Strategy
- Created a first draft of the WG1's final report for review by WG1 and then CSMAC

# Options

- **Broken into three areas**
  - Proposals to stand up a new agency
    - Full-Service Spectrum Agency
    - New Unity Agency
    - Spectrum Resource Agency
  - Proposals to repurpose and expand the authority of the existing agency
    - New Federal Communications Commission (FCC)
    - New NTIA
  - Proposals that could attach to other options or stand on their own
    - R&D Option
    - Updated MOU
    - Other



# Proposals to Stand Up a New Agency

# New Full-Service Spectrum Agency

- **A new independent agency would perform all spectrum policy/management/planning, licensing/authorization, and equipment functions, including sharing and enforcement**
- **Board of Directors: Spectrum expertise required**
- **Existing spectrum functions that are currently performed by the FCC and NTIA would be divested and assigned to this new entity**
- **This option allows the consolidation of all spectrum management functions**
  - Planning and allocation
  - International coordination and cooperation
  - Assignment and licensing
  - Monitoring and enforcement
  - Standards specification and equipment type approval
  - Research and development
  - Forecasting
- **Spectrum coordination offices for all stakeholders**

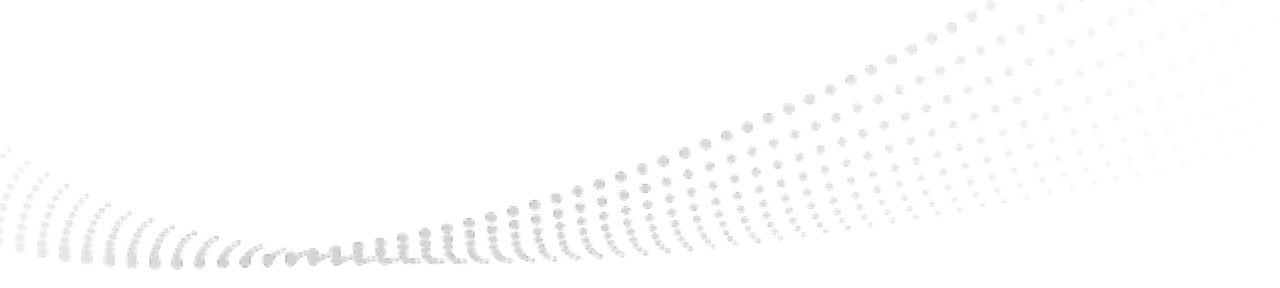


# New Unity Agency

- This option folds the **entire** NTIA and FCC into a new Unity Agency. This would include both spectrum and non-spectrum functions. To borrow an analogy from private sector merger and acquisition parlance, functions within the NTIA and FCC would become subsidiaries of the Unity Agency and would be characterized as “offices” of that new Agency
- The decision-making function would revert to a single administrator and the component parts of the Unity Agency would report to the administrator
- This unified approach would consolidate similar functions that the agencies perform. For spectrum, these functions include
  - Planning and allocation
  - International policy, including treaty negotiation and border coordination
  - Assignment and licensing
  - Monitoring and enforcement
  - Standards specification and equipment type approval
  - Research and development
  - Forecasting

# Spectrum Resource Agency

- **A new agency with responsibility for top-level spectrum governance and policy decisions; implementation would flow down to the FCC and NTIA. Its mission would encompass only:**
  - Planning and allocation
  - International policy, including treaty negotiation and border coordination
  - Research and development
  - Forecasting
- **Spectrum assignment mechanisms, including auctions, licensing, federal assignments, equipment authorization, and enforcement would remain in the domain of the FCC for commercial licenses and unlicensed device manufacturers and in the domain of NTIA for federal assignment holders**
- **Executive Branch agency would be led by the administrator (whose term is 5–7 years)**



# Proposals to Reform Existing Agency

# New FCC

- **The New FCC would take over all spectrum management responsibilities for the federal government**
- **Its mission would expand to sole responsibility for both federal and non-federal spectrum in the following areas**
  - Planning and allocation
  - International policy, including treaty negotiation and border coordination
  - Research and development
  - Forecasting
- **All other responsibilities that NTIA and the FCC have today would remain in place**

# New NTIA

- **The new would take over all spectrum management responsibilities for the commercial sector, non-federal government, and federal government. Its mission would expand to sole responsibility for both federal and non-federal spectrum in the following areas**
  - Planning and allocation
  - International policy, including treaty negotiation and border coordination
  - Research and development
  - Forecasting
- **All other responsibilities that NTIA and the FCC have today would remain in place, including existing spectrum assignment methods. For the FCC, this includes spectrum auctions**



# **Stand-Alone or Other Options That Can Be Combined**

# Research and Development

- **There are several areas of spectrum management that are haphazardly addressed or not addressed at all including an R&D function.**
- **The R&D function could cover**
  - Gathering data about consumer demand or other relevant parameters about demand growth and government use of spectrum
  - Gathering data about evolving technologies and how they will utilize spectrum
  - Advancing the understanding of radio propagation through refinement in modeling
  - Advancing the understanding and development of sharing mechanisms, particularly automated sharing mechanisms
- **This R&D function could be stood up as a group within an agency administering an internal and external R&D work program, or the function could be privately sourced to an entity contracted to execute the R&D agenda**
- **This R&D function could assist efforts by CSMAC WG 2**

# 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 a 15-day period, but gaps remain for non-routine items**
- **Enhanced MOU**
  - For non-routine FCC items, create an agreed escalation process and include specific time frames for resolution. 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 any outstanding areas where consensus cannot be found
  - Identify technologies that enhance spectrum utilization and efficiencies and utilize the Spectrum Sharing Innovation Test-Bed for evaluation, collaborative testing, and possible implementation of such technologies
  - Hold a joint workshop annually to discuss spectrum research and coordination activities and explore novel spectrum sharing, 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**

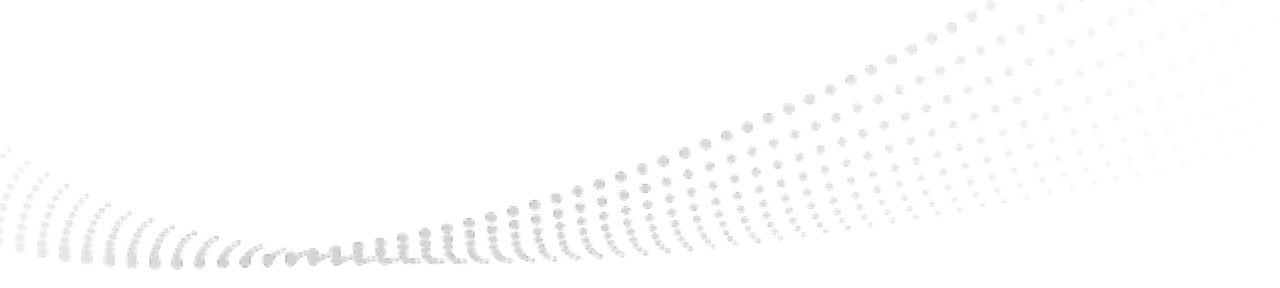


# Other Options

- **Review spectrum management periodically**
  - Ensure that there is a review process to keep our spectrum management process effective and relevant no matter what option is selected (or if the process stays as it is today)
- **Miscellaneous steps to improve the existing process**
  - Increase detailees from each agency (FCC and NTIA) to cross-pollinate the agencies, helping communications and obtaining a better understanding of the process
  - Co-locate the FCC and NTIA in the same office complex so that they can communicate in easily and pleasantly
  - Put all spectrum responsibilities for each agency into one bureau/office so that they can be easily reorganized in the ultimate structure

## Next steps

- **Conduct meeting on April 27 to determine how to finalize the report**
- **Give full CSMAC members an opportunity to provide input prior to the August meeting**
- **Work through August to finalize the report for presentation to the full CSMAC**



# Annex



# CSMAC Working Group 1 Members

- **Co-chairs: Jennifer Manner and Mary Brown**
- **Andrew Roy**
- **Audrey Allison**
- **Bryan Tramont**
- **Carl Povelites**
- **Carolyn Kahn**
- **Chris Weasler**
- **Claude Aiken**
- **Dale Hatfield**
- **Jeff Cohen**
- **Mariam Sorond**
- **Mark Crosby**
- **Mark Gibson**
- **Mark Lewellen**
- **Mark McHenry**
- **Mark Racek**
- **Michael Calabrese**
- **Robert Weller**
- **Steve Sharkey**
- **Thomas Dombrowsky**
- **Wayne Phoel**
- **NTIA Liaison: Chris Mattingly  
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**Thank You!**