

Federal Register Notice: 89 FR 12871, <https://www.federalregister.gov/documents/2024/02/20/2024-03400/request-for-information-on-the-national-spectrum-research-and-development-plan>, February 20, 2023.

## **Request for Information on the National Spectrum Research and Development Plan**

### **Spectrum for the Future**

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March 21, 2024

Mallory Hinks, Technical Coordinator  
Networking and Information Technology Research and Development (NITRD)  
National Coordination Office (NCO)  
National Science Foundation,  
2415 Eisenhower Avenue Alexandria, VA 22314

Re: Response to Request for Information on the National Spectrum Research and Development Plan

Dear Ms. Hinks:

Spectrum for the Future greatly appreciates the opportunity to contribute to structuring the National Spectrum Research and Development Plan through a response to the request for information issued by the NITRD Wireless Spectrum Research and Development Interagency Working Group (WSRD IWG). As the WSRD IWG and the White House Office of Science and Technology Policy conduct their work, Spectrum for the Future stands ready to collaborate to help develop an R&D Plan that will best meet the goals set out in the National Spectrum Strategy.

As a coalition representing a wide array of innovators, anchor institutions, and technology companies, Spectrum for the Future is organized around leveraging shared and locally licensed spectrum to fortify America's technological leadership, industrial strength, and global competitiveness. Our collective experience underscores the vital role that structured research and development can play in pushing the boundaries of the technical sciences. To this end, we propose several considerations for developing the National Spectrum R&D Plan:

**Clarification on Dynamic Spectrum Sharing (RFI Item 7):** As a threshold matter, it is crucial that the National Spectrum R&D Plan accurately defines Dynamic Spectrum Sharing (DSS) as it is commonly understood. Specifically, DSS must refer to the sharing of identical frequency ranges within a given geography, without merely dividing a frequency range between federal and non-

federal users. While dividing a band between users may appear to be 'sharing,' it is better understood as a spectrum allocation policy choice.

**Building on Existing Successes and a Focus on Sharing Between Non-Federal and Federal Stakeholders to Prevent Duplication (RFI Item 1 & 2):**

We urge the WSRD IWG to build beyond the frameworks and successes of Spectrum Access Systems in the Citizens Broadband Radio Service, the Automated Frequency Coordinator in the 6 GHz band, and the PATHSS process outcomes. The focus of these efforts should not be to make specific refinements as they relate to these existing processes, because these techniques are viable today and are either being refined by commercial stakeholders or a combination of commercial and federal stakeholders. The WSRD IWG will be able to use the different technologies developed for these frameworks as building blocks for use in future spectrum bands with different and evolving interference scenarios.

Additionally, the R&D plan should focus on developing sophisticated coexistence techniques that are focused on sharing between federal and non-federal users. The federal government is ideally situated to understand how it can coexist with other federal systems. Non-federal users, similarly, have found many ways to coexist with one another, including contention-based protocols, dynamic database management, and emissions masks. The National Spectrum R&D Plan presents an opportunity to research how to bridge this gap. Perhaps innovative techniques for sharing amongst non-federal users like those named above can be adapted to the federal and non-federal sharing context. Even more, the plan could focus on developing wholly new frameworks for federal and non-federal sharing that enable multiple different non-federal or commercial uses.

**Conduct A Robust Stakeholder Consultation Process Open to All (RFI Item 6):** A successful R&D Plan will facilitate the emergence of innovative, resilient technologies that improve the lives of individual Americans. The emphasis on DSS in the R&D Plan is not only pivotal for economic growth but also for fostering competition among new entrants and smaller telecom providers. Shared license models that could be promoted by DSS have already proven their value across various sectors by enabling innovative applications and ensuring access to spectrum resources for Tribal groups, educational institutions, and local governments.

To refine and enhance the R&D Plan on an ongoing basis, the WSRD IWG should include robust participation by non-federal stakeholders. These non-federal stakeholders will have a central role in adapting and deploying any new technologies developed through this process. There must then be clear

communication between the federal and non-federal stakeholders so that any research is informed by what is commercially viable, especially insofar as the techniques being researched are ultimately envisioned for use by the private sector. Public in-person and virtual working group meetings, as well as open electronic dockets for stakeholder submissions, all focused on the drafting and refining of the WSRD IWG's R&D Plan are the best ways to facilitate the type of collaboration required. The announcement of the May 2024 public meeting already proposed in the WSRD IWG's Request for Information is very encouraging with respect to this point.

A National Spectrum Research and Development Plan that reflects these principles can help cement the United States' position as a global leader in technology and innovation. We look forward to engaging with the WSRD IWG in further discussions.

Thank you for considering our input.

Sincerely,

Spectrum for the Future

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