# NTIA Spectrum Activities Overview

National Academy of Sciences
Committee on Radio Frequencies (CORF)
May 17, 2022

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International Spectrum Policy Division
Office of Spectrum Management, NTIA

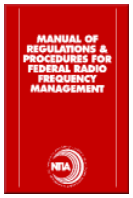
# Outline

- Review of National Spectrum Policy/Management Framework
- Science and Federal Spectrum Policy
  - New Developments:  SII, LSM Initiative
  - Ongoing Coordination Issues
- International Activities
- Other Hot Topics in Spectrum Management

# National Spectrum Management Framework

**V. 2.1**

***47 CFR Part 300***



***NTIA Manual***

The President

***Communications Act of 1934+***

Congress

***NTIA Organization Act+***

NTIA

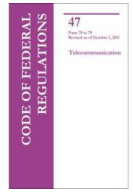
FCC

Domestic and International Coordination

FCC Chair + NTIA A/S bi-annual meetings
Regular staff-level info exchanges
15-day notification/no approval
*(2003 MOU)*

Federal Users

Non-Federal Users



**FCC Rules**
***47 CFR Parts 0-199***

Interdepartment Radio Advisory Committee
Chaired by NTIA OSM
19 Federal agency members

Advisory

Liaison

Policy and Plans Steering Group (PPSG)
Chaired by NTIA Assistant Secretary
Federal agencies + FCC and White House

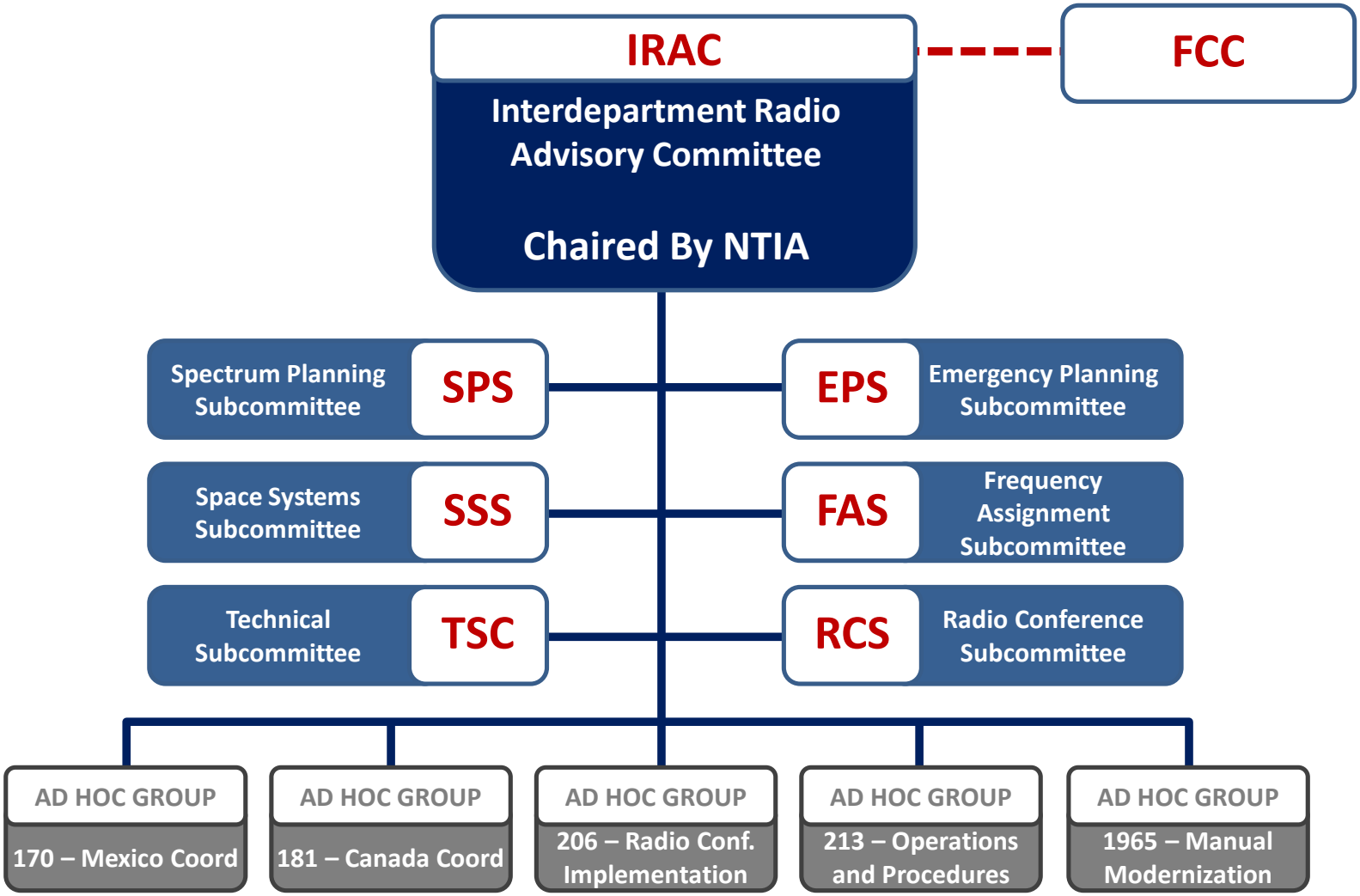
Spectrum Working Group (SWG)

Commerce Spectrum Management Advisory Committee
Non-government advisors to Department of Commerce/NTIA

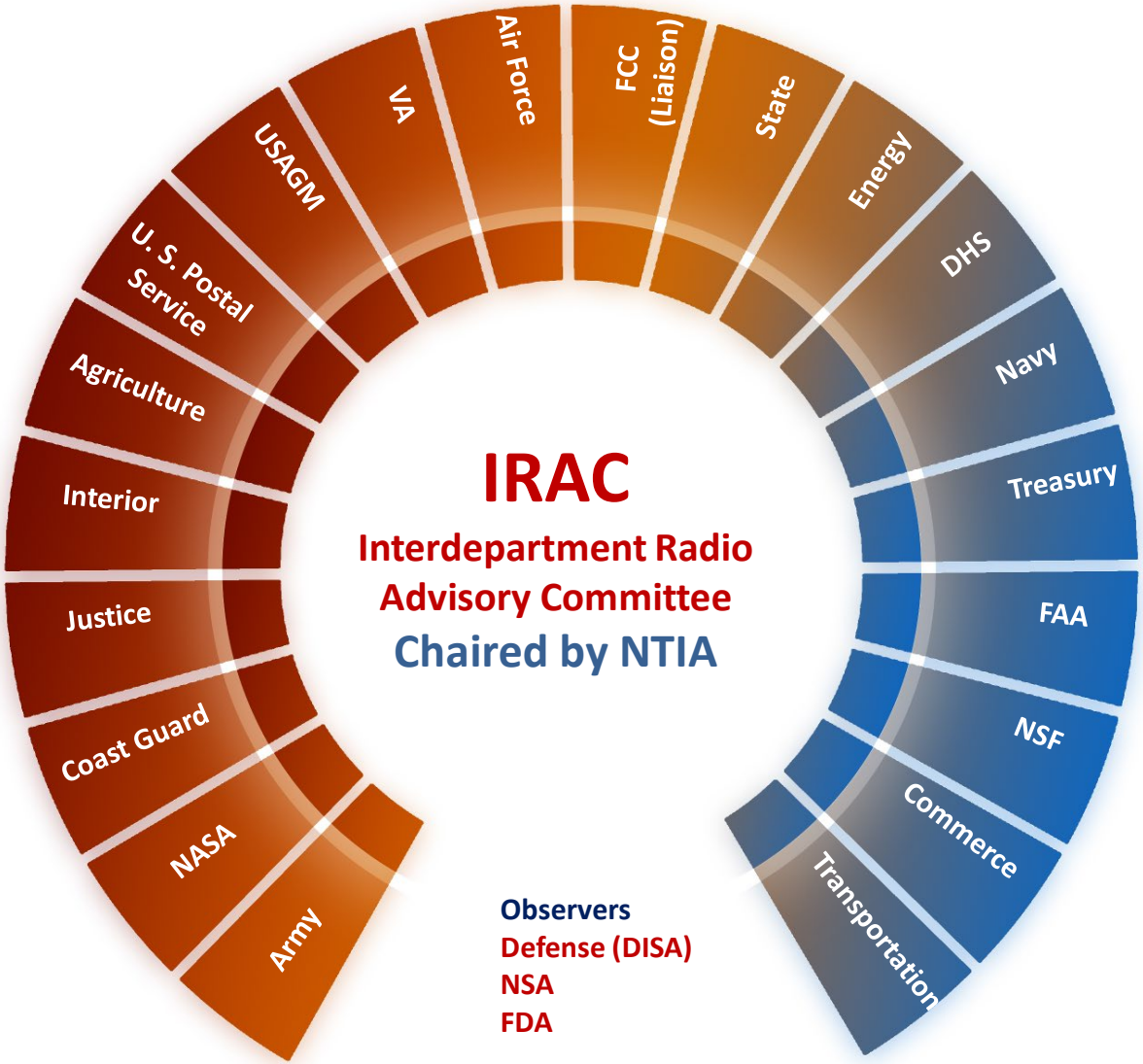
Technological Advisory Council
Non-government advisors to FCC

**U.S. Department of Commerce · National Telecommunications and Information Administration**

# IRAC Structure



# IRAC Members



# Science and Federal Spectrum Policy

- The FY 2022 Consolidated Appropriations Act (Pub. L. No. 117-103) directs NTIA to report to Congress on Spectrum Management for Science and the coordination efforts underway.
- The Joint Explanatory Statement (JES) to the Act "encourages NTIA, in coordination with the FCC and other appropriate stakeholders, to continue ensuring spectrum access for scientific activities."
- *See also*
  - NTIA Manual, Chapter 2 (1965-2017)
  - NTIA Reports to Congress (Sept. 2019 and June 2020)
  - CORF Handbook (2d Ed. 2015)
  - ITU Recommendations

# NTIA Annual Report to Congress On Spectrum Access for Science

- NTIA has filed reports on its coordination efforts to ensure spectrum access for radio astronomy observations and other scientific uses in FY19-FY21.
- NTIA currently is preparing the FY22 report.
- NTIA coordinates with NSF, NASA, and DOC/NOAA to develop the annual report
- The report includes ongoing coordination efforts (domestic and intl.), key developments/initiatives, and future spectrum needs.

# NTIA's Ongoing Coordination Efforts

- NTIA addresses issues raised in the IRAC.
- Updates to the NTIA Manual.
- Supporting leadership roles for U.S. members on important ITU-R study groups (SG7) and working parties, including U.S. prep committees (7B, 7C, 7D).
- Supporting U.S., CITEL and ITU prep activities for science-related agenda items at WRC-23.
- Setting aside ground-based frequency assignment requests that would operate in the National Radio Quiet Zone (NRQZ).

# Recent Developments

- NSF's Spectrum Innovation Initiative (SII)
  - NSF awarded a $25 million grant toward SpectrumX, the first U.S. Center for Wireless Spectrum Research, as part of the SII. *See* https://www.spectrumx.org/
- Workforce Development
  - NTIA is working in conjunction with NSF via the SII program to create targeted programs for workforce development
  - NTIA is collaborating on NASA's Spectrum Workforce Development Initiative through the SPectrum Education AwaRenesS (SPEARS) project, providing an opportunity for agencies to share best practices
- NASA's Lunar spectrum management initiative (LSM)
  - Work is being coordinated with NSF to protect the spectrum environment on the lunar far side (Shielded Zone of the Moon).

# Radio Signal Protection Zones

- National Radio Dynamic Zones (NRDZ)
  - Spectrum Innovation Initiative National Radio Dynamic Zones (SII-NRDZ).
  - Proposals due June 21, 2022, with anticipated funding of $10 million.
- Quiet zone protections around key radio astronomy observatories and other critical sites.
- Adding geographical protections from airborne transmitters to the NRQZ, where the Green Bank, West Virginia, Observatory resides.

# International Spectrum Access

- WRC-23: NTIA working with NSF, NASA and NOAA to protect radio-astronomy and advance other science priorities.
- Space Weather – Study and review measures needed to protect the capability to sense space weather events that may impact the Earth.
- Space Research – Possible regulatory upgrades for space research communications, addressing the increasing need for high data transmission speeds from space-based systems.
- Atmosphere and Earth Sciences
  - Compatibility studies and a possible new secondary allocation for spaceborne radar sounders in the EESS (active) service in the 40-50 MHz band.
  - A possible new EESS (passive) allocation in the 231.5-252 GHz band.

# Other Hot Topics

- Launch services spectrum issues
- Hosted Payloads
- Shift to hybrid government/commercial communications systems
- Improved automation and spectrum management process streamlining
- Interference protection and dispute resolution
- Small satellite systems
- Experimental operations

# Thank You!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