



Advanced Spectrum Policy Course

Lecture 3: FCC and NTIA and OSTP

Fall 2025

Sarah Oh Lam, JD PhD
Technology Policy Institute
Washington, D.C.



Advanced Spectrum Policy

1. Introduction
2. Lecture 1 NRAO Panel Discussion
3. Lecture 2 Federal Spectrum Policy
4. **Lecture 3 FCC and NTIA and OSTP**
5. Lecture 4 FCC Rulemaking Process
6. Lecture 5 Congressional Involvement in Spectrum Policy
7. Lecture 6 International Spectrum Policy
8. Lecture 7 Competition and New Use Cases

Lecture 3: FCC and NTIA and OSTP

3.1. Federal Communications Commission (FCC)

3.1.1. FCC Organizational Chart

3.1.2. Universal Licensing System Database (ULS)

3.1.3. Electronic Comment Filing System (ECFS)

3.1.4. Spectrum Auctions

3.2. National Telecommunications & Information Administration (NTIA)

3.2.1. NTIA Organization Chart

3.2.2. IRAC

3.2.3. Spectrum Table

3.2.4. NTIA CSMAC

3.3. FCC and NTIA Memorandum of Understanding (Aug. 2022)

3.4. White House Office of Science & Technology Policy (OSTP)

3.5. In the News

3.6. Assignment

3.1. Federal Communications Commission (FCC)

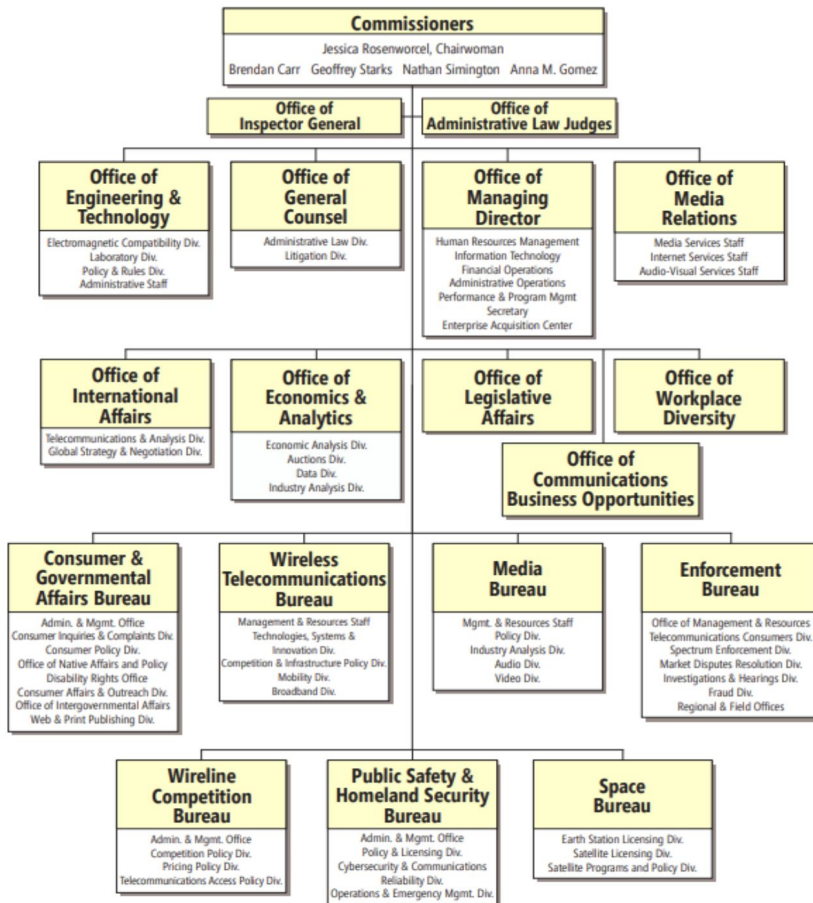
3.1.1. Organizational Chart

3.1.2. Universal Licensing System Database

3.1.3. Electronic Comment Filing System (ECFS)

3.1.4. Spectrum Auctions

3.1.1. FCC Organizational Chart



Organizational Charts of the FCC

The FCC's organizational chart shows that a Chairman leads the agency and has 4 other Commissioners who vote on regulatory matters. The Chairman directs the offices and bureaus which administer the FCC's mandates under the 1996

Telecommunications Act and other communications laws. The Wireless and Wireline Bureaus manage mobile service matters and fixed broadband matters. The Space Bureau focuses on satellite licensing and international matters. The Media Bureau focuses on broadcasting regulations.

The Office of Economics and Analysis, Office of Engineering, and the Wireless Bureau have spectrum auction expertise with economists and engineers.

FCC Organizational Chart (2024),
<https://www.fcc.gov/about-fcc/jobs-internships/new-employee-orientation>.

3.1.2. Universal Licensing System Database (ULS)

License Search

The ULS License Search enables you to search for a wide range of licenses in the Universal Licensing System. The License Search here provides access to the most basic attributes of a license. You can also specify more attributes combinations with the [Advanced Search](#) and search within services like [Amateur](#) using service-specific criteria. Please be aware that some combinations of search criteria may result in a longer wait.

License Search

By Call Sign = **SEARCH**

☐ exact matches only

[Advanced License Search](#)

Advanced Search

Want to search for licenses of any radio service code based on combinations of general license attributes?

[Advanced License Search](#)

Advanced License Search includes:

- ▶ Licensee State, ZIP, and Name
- ▶ Dates (Grant, Last Action, etc)
- ▶ License Status
- ▶ Radio Service Code
- ▶ And more.

Service Specific Search

Want to search for licenses within a service using criteria relevant to that specific service?

- ▶ [Aircraft](#)
- ▶ [Amateur](#)
Vanity Call Signs, Operator Class, and more.
- ▶ [Commercial/Restricted Permits](#)
Operator Class, COLEM, and more.
- ▶ [GMRS](#)
- ▶ [Ship](#)
MMSI#, Ship Name, and more.

Specialized Search

Want to use customized criteria to search for a license within all relevant services?

- ▶ [Market Based](#)
Search by auction number, markets, channel block and more.
- ▶ [Site Based](#)
Search by station class, frequency, Antenna Structure Registration (ASR) number, and more.
- ▶ [Facility ID](#)
Search by Facility Identification Number for Broadcast Auxiliary Licenses.
- ▶ [Geographic](#)
Search by coordinates, county/state, address and frequency information.
- ▶ [Buildout Deadline](#)
Search by Buildout Deadline information, auction, radio services, and more.
- ▶ [Lease Specific](#)
Search by Lease information.

The FCC's Universal Licensing System Database contains an advanced search tool that provides visibility into all spectrum licenses across frequency bands, services, and geographies. The ULS shows the breadth of the spectrum allocation table with service specific search, specialized search, and advanced license searches based on state, zip code, license code, dates of grant or last action, license status, radio service code, and more. The ULS also includes historical data and information on secondary leases. Buildout deadlines are included in license data, as well as different market geographies, antenna structure registrations, facility identification numbers, and auction information.

3.3.3. Electronic Comment Filing System (ECFS)



Welcome to the FCC's Electronic Comment Filing System

ECFS serves as the repository for official records in the FCC's docketed proceedings from 1992 to the present. The public can use ECFS to retrieve any document in the system, including selected pre-1992 documents.

Search All Public Filings

Search Full Text

+ ADVANCED SEARCH

Proceeding(s)

Name(s) of Filer(s)

Law Firm

Attorney/Author/Submitter Name(s)

Date Received Range

From

To

MM/DD/YYYY

MM/DD/YYYY

Posted Date Range

From

To

MM/DD/YYYY

MM/DD/YYYY

The FCC's Electronic Comment Filing System (ECFS) is the administrative docket and official record of FCC proceedings from 1992 to today. The ECFS is open to the public to retrieve documents and selected pre-1992 documents as well. According to the Administrative Procedure Act and rulemaking procedures, the FCC posts its notices of proposed rulemakings (NPRM), notice of inquiry (NOI), reports and orders (R&O), and collected comments from the public to the ECFS.

3.1.4. Spectrum Auctions



Federal Communications Commission

Browse by
CATEGORY

Browse by
BUREAUS & OFFICES

About the FCC
Proceedings & Actions
Licensing & Databases
Reports & Research
News & Events
For Consumers

Home / Economics and Analytics / Auctions Division / Auctions

Auctions Summary

Auctions

Auction Formats

Summary

About Auctions

General Releases

Pre-Auction Timeline

Archived Auction Releases

Conducting Auctions

Broadcast Incentive Auction

Prohibited Communications

Conferences

Consumer Alert

Tribal Land Credits

About Form 175

Band Plans

Completed Spectrum Auctions

Auction	Licenses Auctioned	Licenses Won	Net Winning Bids	Rounds
1 Nationwide Narrowband (PCS) 7/25/1994 - 7/29/1994	10	10	\$617,006,674	47
2 Interactive Video and Data Services (IVDS) 7/28/1994 - 7/29/1994 Map: CMA (MSA & RSA) (pdf)	594	594	\$213,892,375	Oral Outcry
3 Regional Narrowband (PCS) 10/26/1994 - 11/8/1994 Map: RPC (pdf)	30	30	\$392,706,797	105
4 Broadband PCS A and B Block 12/5/1994 - 3/13/1995 Map: MTA (pdf)	99	99	\$7,019,403,797	112
5 Broadband PCS C Block 12/18/1995 - 5/6/1996 Map: BTA (pdf)	493	493	\$10,071,708,842	184
6 Multipoint/Multichannel Distribution Services 11/13/1995 - 3/28/1996 Map: BTA (pdf)	493	493	\$216,239,603	181
7 900 MHz Specialized Mobile Radio Service 12/5/1995 - 4/15/1996 Map: MTA (pdf)				

tribe-reports-22525 – Bucket details – Cloud...tpi-tribalbroa

The FCC has held auctions for spectrum licenses since 1994, with over 100 auctions and over \$200 billion in gross proceeds. These completed spectrum auctions represent market demand for radio spectrum licenses and a supply of spectrum use rights for the private sector and commercial use facilitated by the FCC.

3.2. National Telecommunications & Information Administration (NTIA)

3.2.1. Organization Chart

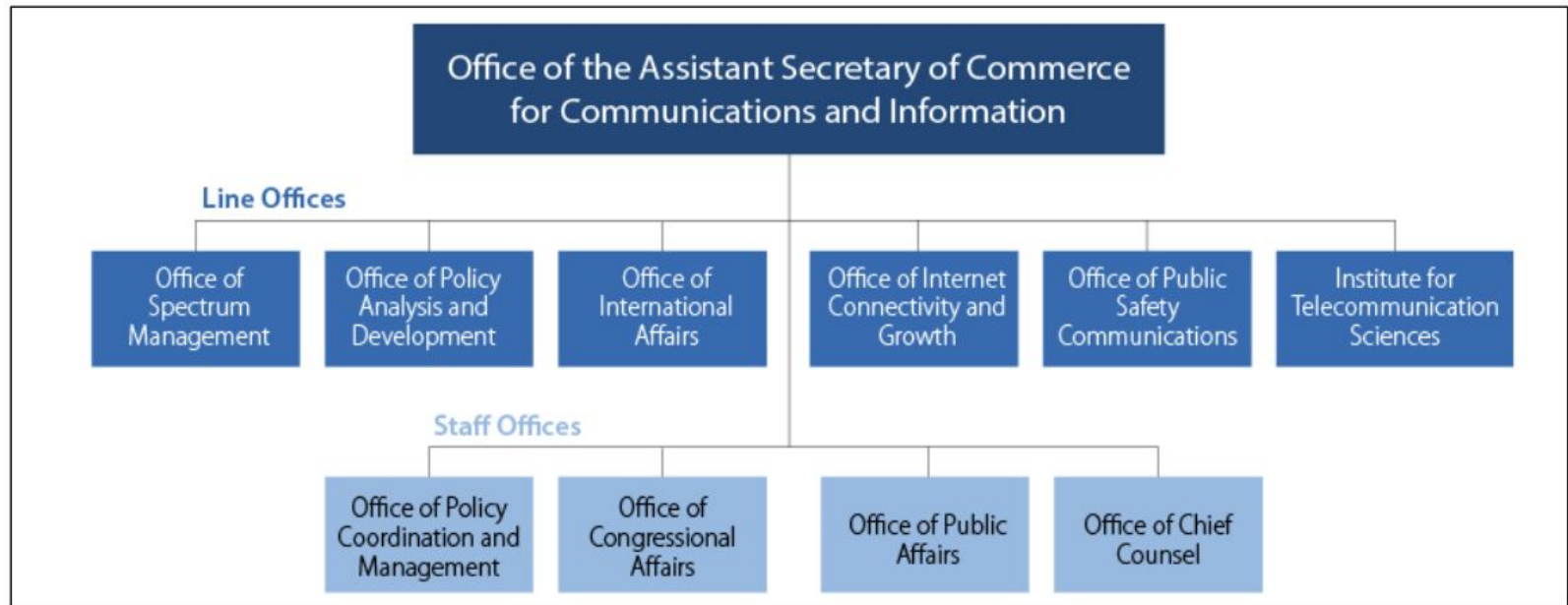
3.2.2. IRAC

3.2.3. Spectrum Table

3.2.4. CSMAC

3.2.1. NTIA Organization Chart

Figure 1. Organization Chart of NTIA

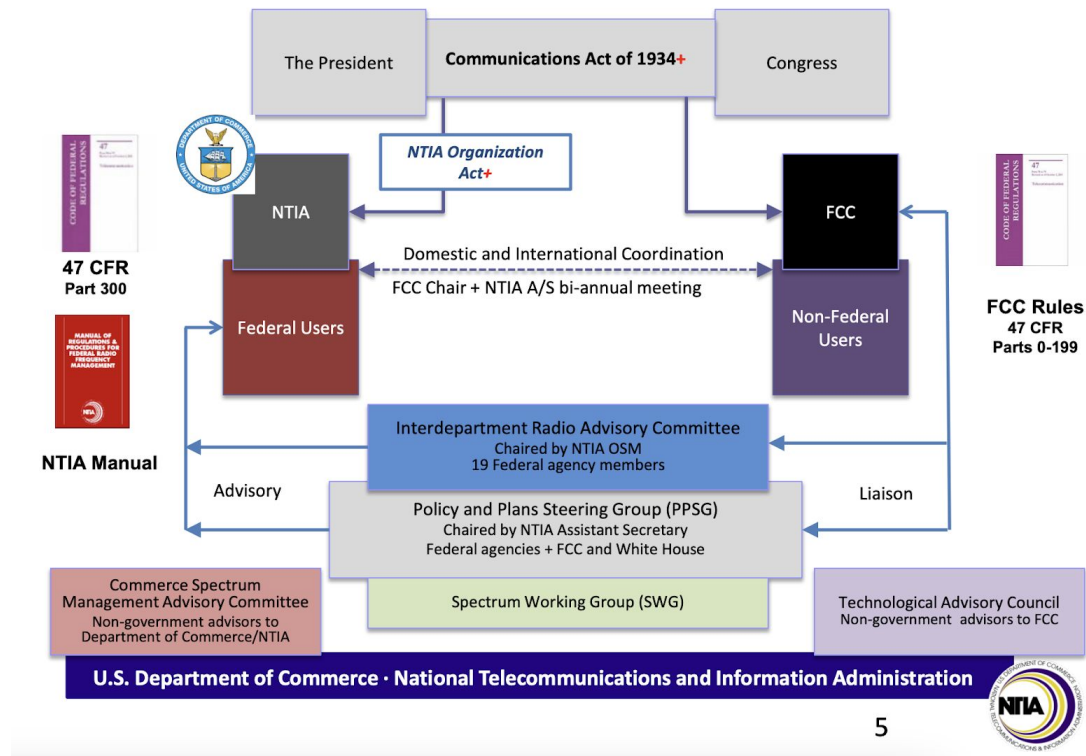


Source: CRS based on NTIA, *Organization Chart*, at <https://www.ntia.doc.gov/offices>.

Congressional Research Service, "The National Telecommunications and Information Administration (NTIA): Current Roles and Programs," CRS Report No. R47075, April 20, 2022, <https://sgp.fas.org/crs/misc/R47075.pdf>.

3.2.1. NTIA Organization Chart

U.S. Spectrum Management Framework



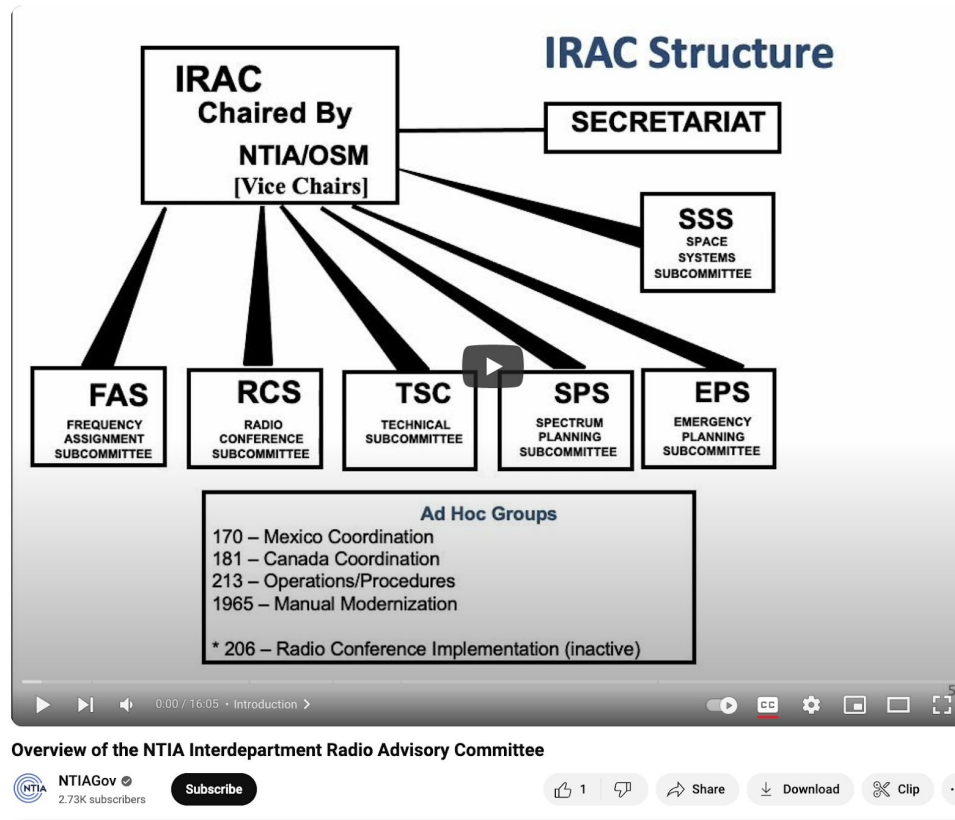
John Alden, "The U.S. Federal Government: Spectrum Management Processes," NTIA Office of Spectrum Management, at 5, https://ustti.org/wp-content/uploads/2023/07/Day-1-4_Alden_Federal-Spectrum-Management_draft.pdf.

3.2.2. IRAC



The Interdepartment Radio Advisory Committee (IRAC) was established in 1922 and has been where federal spectrum allocations are determined between agencies. It is chaired by the NTIA and includes representatives from each of the federal agencies that use radio spectrum. The IRAC's activities are governed by the "Redbook" which is the Manual of Regulations for Federal Radiofrequency Spectrum Management. This manual helps agencies know how to apply for spectrum assignments and the procedures for coordination of federal radio frequencies.

3.2.2. IRAC

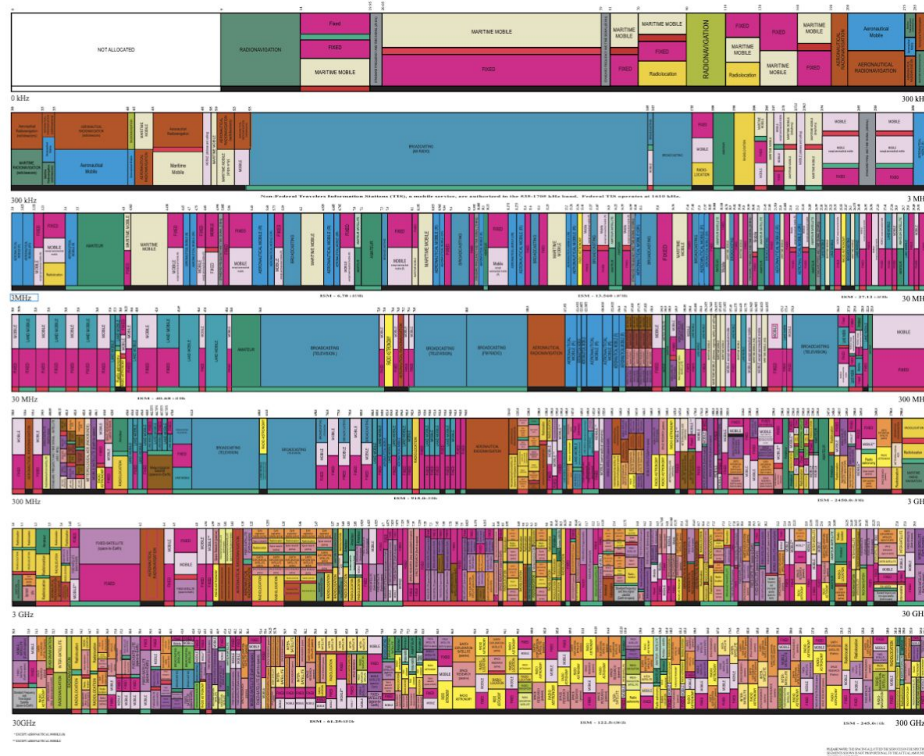


Overview of the NTIA Interdepartment Radio Advisory Committee,
<https://www.youtube.com/watch?v=-TwvDfd6Xys>.

3.2.3. Spectrum Table

UNITED
STATES
FREQUENCY
ALLOCATIONS

THE RADIO SPECTRUM



U.S. Frequency Allocations Spectrum Table,
<https://www.ntia.gov/page/united-states-frequency-allocation-chart>.

3.2.3. Spectrum Table

Table of Frequency Allocations					
International Table			United States Table		Page 1
Region 1 Table	Region 2 Table	Region 3 Table	Federal Table	Non-Federal Table	FCC Rule Part(s)
Below 8.3 (Not Allocated)			Below 8.3 (Not Allocated)		
5.53 5.54			5.53 5.54		
8.3-9			8.3-9		
METEOROLOGICAL AIDS 5.54A 5.54B 5.54C			METEOROLOGICAL AIDS 5.54A		
9-11.3			9-11.3		
METEOROLOGICAL AIDS 5.54A			METEOROLOGICAL AIDS 5.54A		
RADIONAVIGATION			RADIONAVIGATION US18		
			US2		
11.3-14			11.3-14		
RADIONAVIGATION			RADIONAVIGATION US18		
			US2		
14-19.95			14-19.95	14-19.95	
FIXED			FIXED	Fixed	
MARITIME MOBILE 5.57			MARITIME MOBILE 5.57		
			US2	US2	
5.55 5.56			19.95-20.05		
19.95-20.05			STANDARD FREQUENCY AND TIME SIGNAL (20 kHz)		
			US2		
20.05-70			20.05-59	20.05-59	
FIXED			FIXED	FIXED	
MARITIME MOBILE 5.57			MARITIME MOBILE 5.57		
			US2	US2	
			59-61		
			STANDARD FREQUENCY AND TIME SIGNAL (60 kHz)		
			US2		
			61-70	61-70	
			FIXED	FIXED	
			MARITIME MOBILE 5.57		
			US2	US2	
5.56 5.58					
70-72	70-90	70-72	70-90	70-90	Private Land Mobile (90)
RADIONAVIGATION 5.60	FIXED	RADIONAVIGATION 5.60	FIXED	FIXED	
	MARITIME MOBILE 5.57	Fixed	MARITIME MOBILE 5.57	Fixed	
	MARITIME RADIONAVIGATION 5.60	Maritime mobile 5.57	Radiolocation	Radiolocation	
	5.60	5.59			
	Radiolocation				
72-84		72-84			
FIXED		FIXED			
MARITIME MOBILE 5.57		MARITIME MOBILE 5.57			
RADIONAVIGATION 5.60		RADIONAVIGATION 5.60			
5.56					
84-86		84-86			
RADIONAVIGATION 5.60		RADIONAVIGATION 5.60			
		Fixed			
		Maritime mobile 5.57			
		5.59			

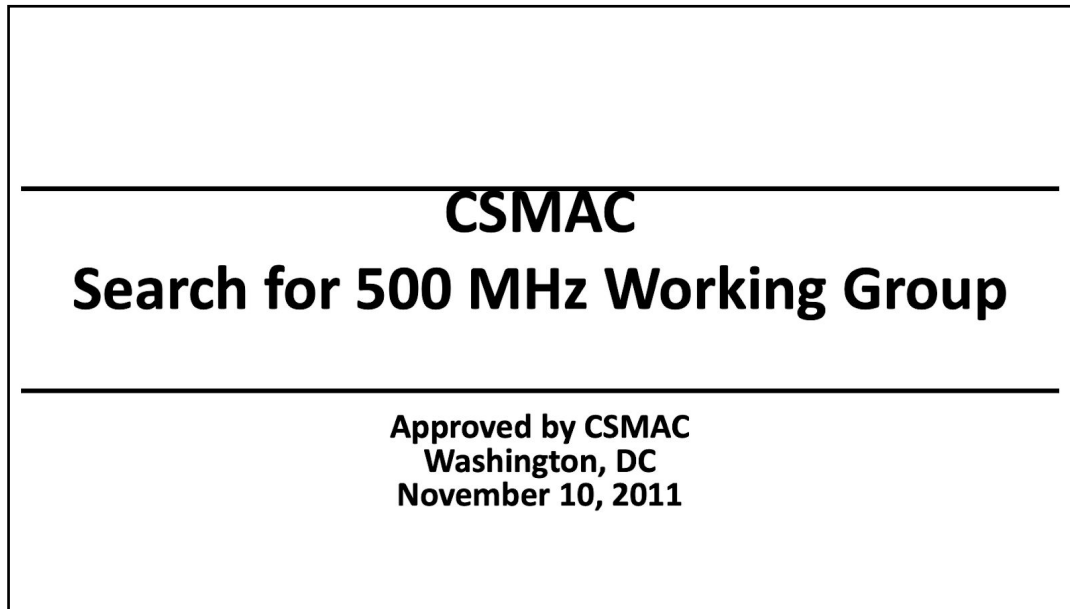
4.1.3

4-4

January 2021 Edition (Rev. 1/2023)

NTIA Table of Frequency Allocations, 2021 Edition, Revised 2023, at 4-4,
https://www.ntia.gov/sites/default/files/2023-11/4_2021_edition_rev_2023.pdf.

3.2.4. NTIA CSMAC



The CSMAC is the Commerce Spectrum Management Advisory Committee (CSMAC) and advises the Assistant Secretary for Communications and Information at NTIA of spectrum issues. It's a group of 30 spectrum experts appointed as "Special Government Employees," from outside the Federal government who are selected based on their expertise and ability to meaningfully advise NTIA on spectrum decisions. The committee was created in 2004 and members apply to join the committee for 2-year terms.

A record of CSMAC meetings is posted going back to 2006. The CSMAC serves various functions with notable assistance in identifying government spectrum that can be repurposed for commercial use. In 2012, it was used to help identify 500 MHz of federal spectrum that could be cleared for commercial use.

3.2.4. NTIA CSMAC



07242018 NTIA CSMAC Meeting Part1



NTIAGov
2.73K subscribers

Subscribe



1



Share



Download



Clip



104 views Jul 30, 2018

07242018 NTIA CSMAC Meeting Part1

NTIA CSMAC Meeting Part 1, 2018,
<https://www.youtube.com/watch?v=qObBfj7ayz4>.

3.3. FCC and NTIA Memorandum of Understanding (Aug. 2022)

**MEMORANDUM OF UNDERSTANDING
BETWEEN THE
FEDERAL COMMUNICATIONS COMMISSION
AND THE
NATIONAL TELECOMMUNICATIONS AND INFORMATION ADMINISTRATION**

This Memorandum of Understanding (MOU) relates to increased coordination between Federal spectrum management agencies to promote the efficient use of the radio spectrum in the public interest.

I. Parties

This MOU constitutes an agreement between the Federal Communications Commission (FCC) and the National Telecommunications and Information Administration (NTIA), U.S. Department of Commerce.

II. Authorities

The NTIA Act requires the Assistant Secretary for Communications and Information and the Chair of the FCC to meet, at least biannually, to conduct joint spectrum planning with respect to certain issues.¹ The MOU establishes a framework for compliance with this statutory requirement. FCC authority to enter into the MOU arises from the provision of the Communications Act of 1934, as amended, empowering the FCC to perform any and all acts necessary to execute its functions,² as well as provisions establishing the FCC's authority to regulate non-Federal Government use of spectrum.³ NTIA authority to enter into the MOU arises from the provision of the NTIA Act empowering NTIA to develop, in cooperation with the FCC, plans for improved management of all electromagnetic spectrum resources,⁴ as well as provisions of the NTIA Act and the Communications Act establishing NTIA's authority to regulate Federal Government use of spectrum,⁵ advise the President on telecommunications

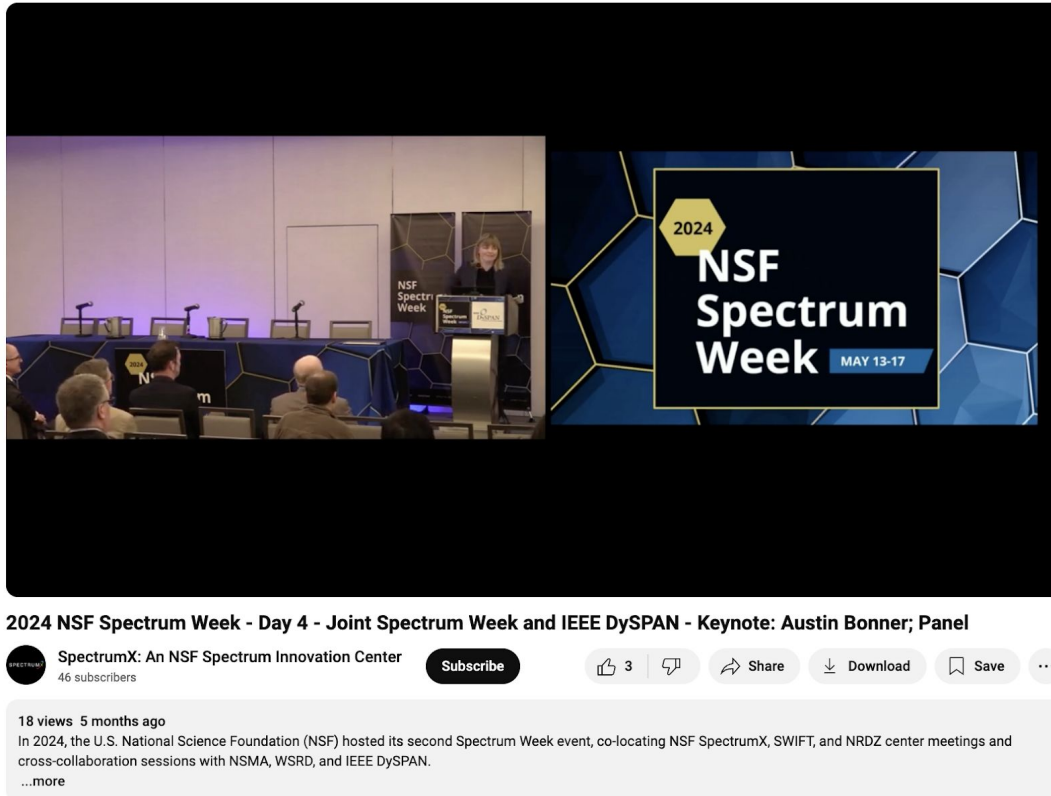
¹ 47 U.S.C. § 922 ("The Assistant Secretary and the Chairman of the Commission shall meet, at least biannually, to conduct joint spectrum planning . . .").

² 47 U.S.C. § 154(i) ("The Commission may perform any and all acts, make such rules and regulations, and issue such orders, not inconsistent with this Act, as may be necessary in the execution of its functions.").

³ See 47 U.S.C. § 151 (creating the FCC for the purpose of regulating interstate and foreign commerce by wire and radio); 47 U.S.C. § 301 (stating the Act's purpose of maintaining Federal Government control of the radio spectrum and requiring that no person transmit radio signals except pursuant to a license granted under the Act); 47 U.S.C. §

The FCC and NTIA have a Memorandum of Understanding that outlines their cooperation in federal spectrum management. The FCC is an independent agency which operates separately from NTIA which is an agency of the U.S. Department of Commerce. While the NTIA Act requires the NTIA administrator to meet with the FCC chair biannually, the MOU outlines the framework for compliance with this requirement.

3.4. White House Office of Science & Technology Policy (OSTP)



The White House Office of Science and Technology Policy has a central role in directing the President's agenda in spectrum policy in coordination with the Secretary of Commerce and the Administrator of the NTIA. Other spectrum policy experts may be found among the staff of the National Security Council, National Economic Council, and Office of Management and Budget as well.

2024 NSF Spectrum Week – Day 4, Joint Spectrum Week and IEEE DySPAN – Keynote: Austin Bonner, <https://www.youtube.com/watch?v=M7Ouj30rmWQ>.

3.5. In the News



“FCC Sets Stage for SpaceX and Wireless Industry C-Band Showdown,” Space News, Feb. 7, 2024,
<https://spacenews.com/fcc-sets-stage-for-spacex-and-wireless-industry-c-band-showdown/>.

3.6. Assignment

Read the FCC and NTIA MOU. Can you think of examples where federal and non-federal/commercial spectrum users may have conflicts or interference disputes that would put the FCC and NTIA at odds with each other? Where does the OSTP or White House fit into this MOU?

- Memorandum of Understanding Between the FCC and NTIA (2022), https://www.ntia.gov/sites/default/files/publications/ntia-fcc-spectrum_mou-8.2022.pdf.

3.7. Learning Objectives

Examine the roles and organizational structures of the FCC, NTIA, and OSTP in federal spectrum management, including tools like licensing databases and comment systems. Understand interagency coordination through mechanisms such as the FCC-NTIA Memorandum of Understanding and advisory bodies like IRAC and CSMAC.



www.nrao.edu
science.nrao.edu
public.nrao.edu

*The National Radio Astronomy Observatory is a facility of the National Science
Foundation
operated under cooperative agreement by Associated Universities, Inc.*