

A Look Inside the U.S. Federal Communications Commission (FCC)

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US Regulation Landscape Overview

Characteristics of the US Regulatory Landscape –

- Complex structure and difficult to navigate
 - Multiple agencies working various aspects of the same issue
- Rule Making Proceedings are time consuming and complicated
 - Adoption does not guarantee (immediate) implementation
- Often maintain outdated and/or obsolete requirements/mandates





Interagency Spectrum Advisory Council formed under NSS-2023



Executive Branch defines government priorities and funds research



Regulators define operational/safety parameters and enforces requirements



Industry develops solutions to meet consumer demands in accordance with (government & industry) requirements



U.S. ICT Regulatory & Policy



Consumers drive Demands which fosters innovation



Congress est. laws taking into account consumer interests & Industry constraints

Federal Communications Commission (FCC)



The FCC, established by the Communications Act of 1934, is an *independent* federal regulatory agency responsible directly to Congress

Charged with regulating interstate and international communications by radio, television, wire, satellite, and cable.

Oversee the allocation & management of nonfederal (or commercial) spectrum. Was granted authority in 1981 to assign licenses using a lottery. In 1993, Congress granted authority to assigned licenses using competitive bidding.

[**The Federal Communications Commission: Structure, Operations, and Budget, May 3, 2022](#)

Federal Communications Commission (FCC) Structure

FCC Leadership – 5 Commissioners

- The FCC leadership, by law, comprises a “bipartisan” panel of five commissioners appointed by the President and confirmed by the Senate for (staggered) five-year terms
- The President designates one of the commissioners as the chairperson
- Only three commissioners can be of the same political party (of the President)



Jessica Rosenworcel, Chair (D)



Geoffrey Starks (D)



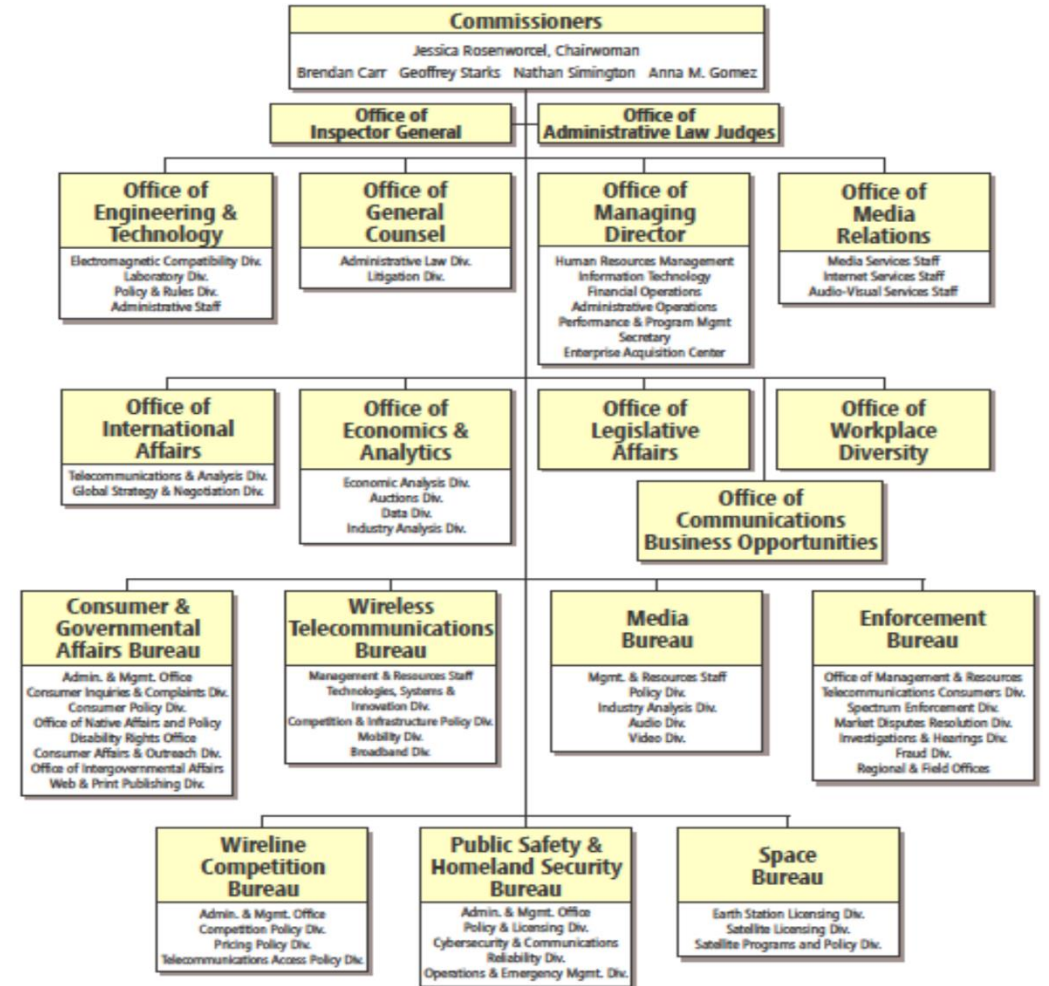
Anna M. Gomez (D)



Brendan Carr (R)



Nathan Simington (R)



Source: [FCC – About the FCC](#)

Federal Communications Commission (FCC) Structure

[FCC Initiatives](#) defined under current leadership



5G Leadership– taking steps to enable US global leadership in wireless 5G. Addressing spectrum availability (high-band, mid-band, low-band & unlicensed), infrastructure policy, and modernizing regulations



National Broadband Data – effort to update dataset of broadband availability to identify the unserved and underserved communities most in need of funding for high-speed internet infrastructure investments.



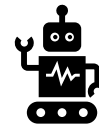
Digital Discrimination – established a cross-agency Task Force to create rules and policies towards enabling access to all regardless of location, sex, age, race, etc.. (ensure digital diversity)



Privacy and Data Protection – established a Task Force to coordinate across the agency on the rulemaking, enforcement, and public awareness needs in the privacy and data protection sectors



Rural Broadband - ensure dollars collected by FCC are properly invested and produce new broadband services in rural areas to bring connectivity to consumers in areas lacking access to broadband



Combatting Robocalls –working to combat the illegal spoofing, robocalls and robotexts through stronger enforcement actions and policies. U.S. consumers receive approximately 4 billion robocalls per month.



Homework Gap – looks to establish programs to address students left offline because they can't access or afford broadband services



Telehealth - engaging with the healthcare community to implement initiatives to keep Americans connected to critical healthcare services.

Federal Communications Commission (FCC) Structure

Comprised of 7 Bureaus & 12 Offices

Bureaus

Bureaus & offices develop & maintain regulatory requirements, issues/process licensing applications, foster development of new services, conduct investigations, set rules to ensure public safety, and distribute consumer information to educate.

[Consumer & Governmental Affairs](#) - Develops consumer-related regulations/policies; e.g., people with disabilities and those affecting tribal nations

[*Enforcement](#) -Enforces FCC rules

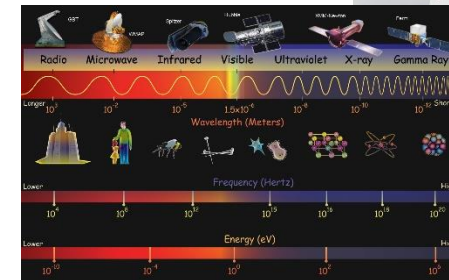
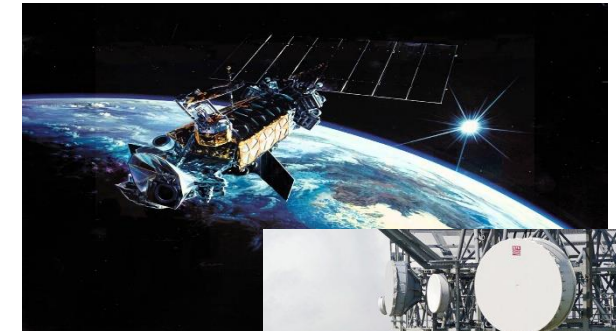
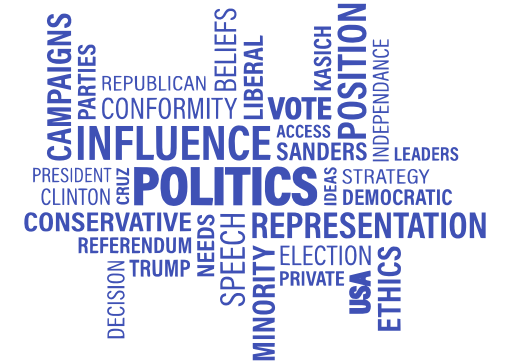
[Media](#) - Oversees broadcast radio and television, as well as cable and satellite services

[Public Safety & Homeland Security](#) - Engages on initiatives surrounding public safety and emergency responses; e.g., natural disaster, pandemic or terrorist attack. Oversees CSRIC & maintains the Covered List

[Space](#) – Engages on policy and licensing matters related to nonfederal satellite and space-based communications and activities. Established in April 2023, formerly the International Bureau.

[*Wireless Telecommunications](#) - Regulates domestic wireless telecommunications programs and policies, including licensing

[Wireline Competition](#) - Develops and recommends wireline telecommunications policy goals, objectives, programs and plans



* We will take a deeper dive into these areas of greater interest

Federal Communications Commission (FCC) Structure

[Wireless Telecommunications](#), comprised of 4 divisions (broadband, mobility, competition & infrastructure, and technologies), oversees policies and procedures surrounding licensing of all wireless services, from fixed microwave links to amateur radio to mobile broadband services. Also produce an annual assessment of the wireless industry -- the [Mobile Wireless Competition Report](#) and is attempting to run the FCC [Spectrum Dashboard](#) – it has issues

Mobility Division develops policy and rules around wireless communications. Areas of interest: 3.5GHz/CBRS, DSRC, ITS, SMR, & spectrum caps

Broadband Division develop & maintains rules and regulations for services including AWS, 600 MHz, Broadband Radio Service, Fixed Point-to-Point Microwave (wireless backhaul), and Broadcast Auxiliary Services (such as wireless microphones), and the Upper Microwave Flexible Use Service (UMFUS).

Competition & Infrastructure Policy Division develops competition and infrastructure policies to promote competition & the rapid deployment of wireless communications services

Fig. II.B.25

Ranking of Most Downloaded Apps Worldwide (Q2 2022)

Rank	Name of App	Category
1	Instagram	Social Media
2	Facebook	Social Media
3	TikTok	Social Media
4	WhatsApp Messenger	Messaging
5	Snapchat	Social Media
6	Telegram	Messaging
7	Facebook Messenger	Messaging
8	Meesho	Shopping
9	CapCut	Video Editing
10	Spotify	Music Streaming

Source: data.ai.

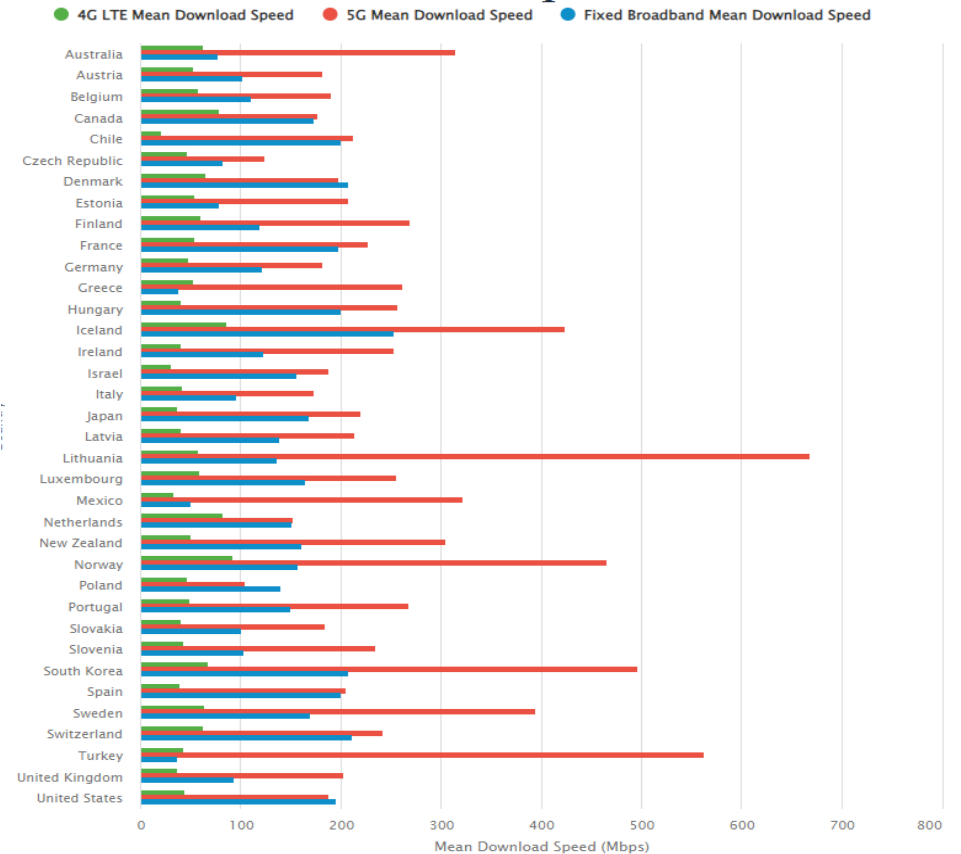
FCC’s biannual **Communications Marketplace Report** aims to assess the competitive state of the communication marketplace. Areas covered include:

- Fixed Broadband Service | Mobile Wireless | Satellite | Radio (audio) |TV (video)

For speed test, FCC uses Ookla which cannot specify which is unable to distinguish the technology that the test taker is using. Disclaimer -Data based on Wi-Fi-using devices are included in these results.



International Fixed and Mobile Broadband Speeds



Federal Communications Commission (FCC) Structure

Comprised of 7 Bureaus & 12 Offices

Offices

[Administrative Law Judges](#) - The Office composed of judges who preside over hearings and issue decisions

[Communications Business Opportunities](#) - Office supports opportunities for small, women-owned, and minority-owned communications businesses.

[*Economics and Analytics](#) - Responsible for expanding the use of economic analysis into Commission policy making, for enhancing the development **and use of auctions**, and for implementing consistent and effective agency-wide data practices and policies.

[*Engineering & Technology](#) -OET advises the FCC on technical and engineering matters and develops and administers Commission decisions regarding **spectrum allocations –also grants equipment authorizations**

[General Counsel](#) - Commission's chief legal advisor and representative

[Inspector General](#) - Independent entity whose mission is to detect and deter waste, fraud, abuse, and misconduct in FCC

[International Affairs](#) - Responsible for the FCC's engagement of foreign and international regulatory authorities

[Legislative Affairs](#) – Serves as liaison between the FCC and Congress & other federal agencies.

[Managing Director](#) - Manages the FCC

[Media Relations](#) - FCC's main point of contact with the media.

[Secretary](#) - oversees the receipt and distribution of documents filed by the public through electronic and paper filing systems

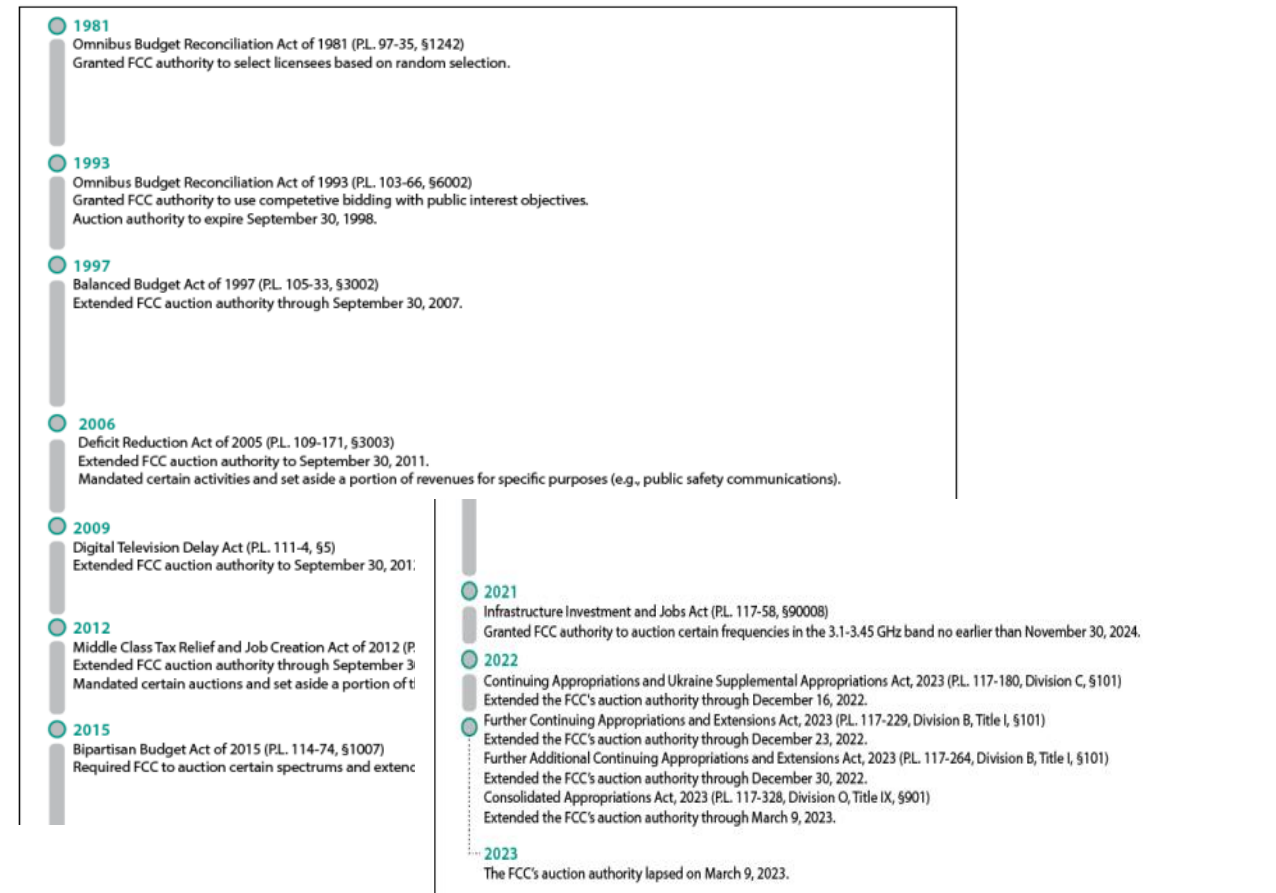
[Workplace Diversity](#) - oversees the FCC employment opportunities

* We will take a deeper dive into these areas of greater interest

Federal Communications Commission (FCC) Structure

Office of Economics and Analytics (OEA), established in 2018, is tasked with performing economic analyses of rulemakings, adjudications, and transactions. OEA is split in several divisions overseeing (1) spectrum auctions and auctions for universal service support, (2) data practices and policies, (3) economic analysis and (4) industry analysis.

Figure 1. The FCC's Spectrum Auction Authority: Timeline of Changes (1981-2023)



Source: CRS.

FCC Auction Authority

Congress created FCC in 1934, in part, to manage and allocate nonfederal (or commercial) use of spectrum and granted the FCC authority to assign licenses.

FCC grants licenses to nonfederal/commercial entities (on a random basis) to use specific frequencies.

FCC also sets terms and conditions for use of the spectrum to “serve the public interest, avoid interference among users, and promote the most efficient use of spectrum.”

In 1997, FCC was granted authority to conduct spectrum auctions

Auctions Division (AD) serves as the FCC resource for all auction design and implementation

- Last completed auction was Auction 108 offering county-based geographic overlay licenses for spectrum in the 2.5 GHz band (2496–2690 MHz).
- Auction 108 net proceeds: ~\$419 million USD
- Highest auction net proceed: \$81 billion USD (Auction 107 -3.7GHz)
- FCC’s authority to auction spectrum *lapsed* in March 2023 and has NOT been renewed. (First time in 30 years.)

Source: CRS, [The Federal Communications Commission’s Spectrum Auction Authority: History and Options for Reinstatement](#), Updated September 12, 2023

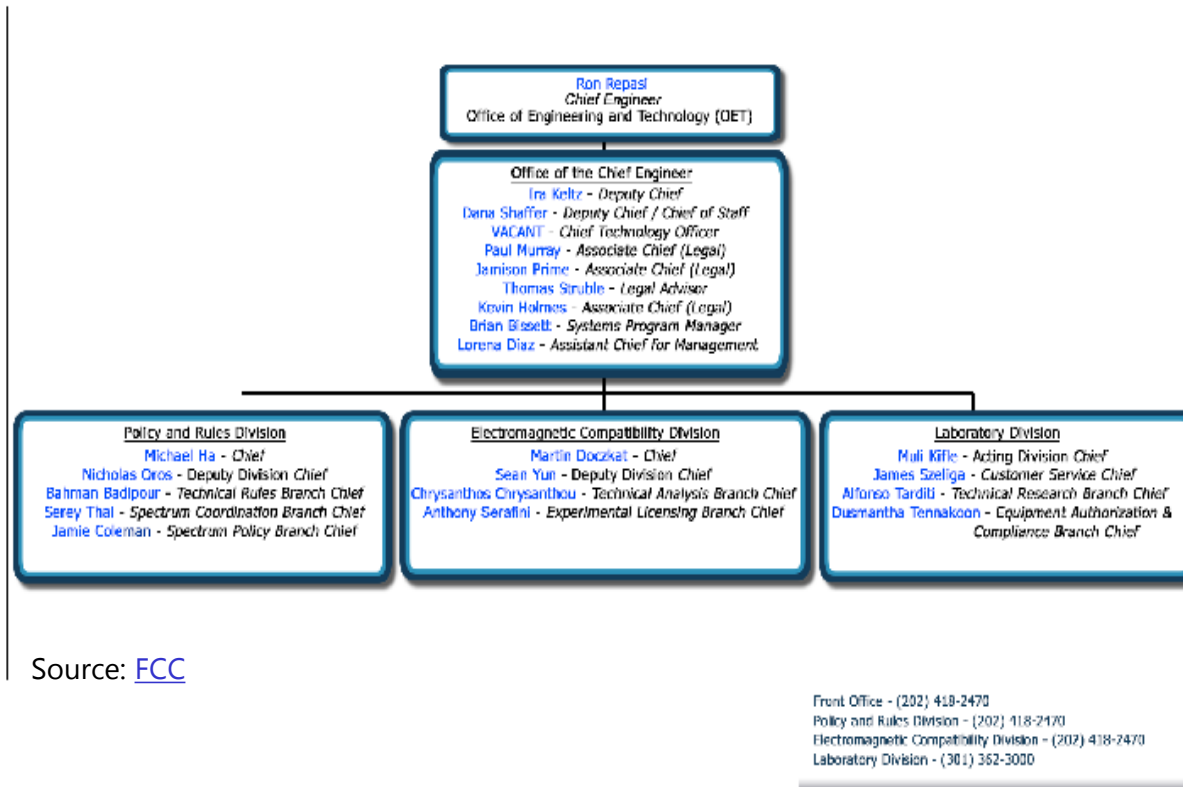
Federal Communications Commission (FCC) Structure

Policy and Rules Division conducts proceedings to develop policy and rules on spectrum allocation and use, equipment authorization, and unlicensed devices (e.g., 6GHz, TVWS, & DSRC). **Represents the Commission on NTIA's** Interdepartmental Radio Advisory Committee (IRAC) and coordinates Federal and non-Federal frequency assignments in shared frequency bands.

Electromagnetic Compatibility Division plans and conducts studies on RF propagation and communications systems characteristics, as well as develops analytical techniques and models to improve spectrum utilization. Also studies broadband and Internet technologies, developed SAR requirements, and evaluates broadband services (speed test). Convener of the [Technological Advisory Council \(TAC\)](#).

Maintains list of the [Radio Spectrum Allocation](#)

Office of Engineering and Technology (OET) - Organization Chart



OET advises the FCC on frequency allocation and spectrum usage, maintains the Table of Frequency Allocations, represents the agency on relevant issues with NTIA and the Interdepartmental Radio Advisory Committee and directs the FCC's Equipment Type Approval program. OET advises and participates with other bureaus on proceedings regarding spectrum management, emerging technologies and technical standards.

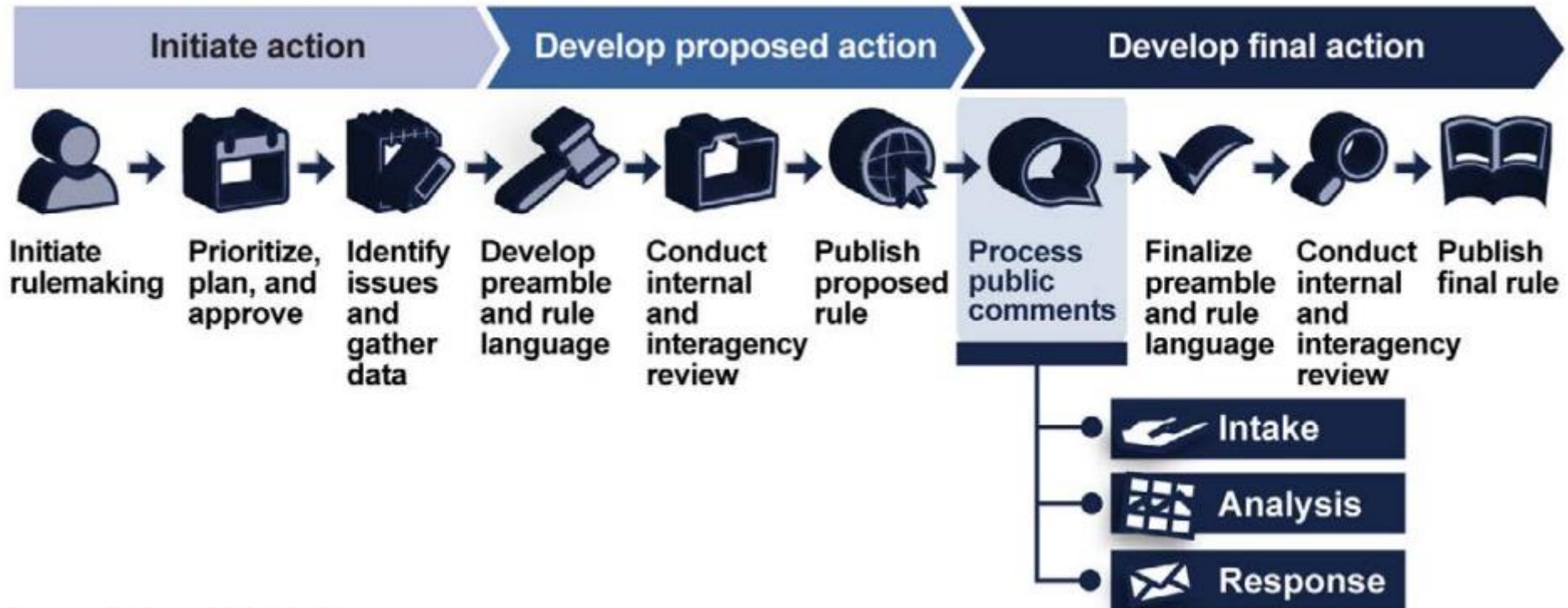
Laboratory Division is responsible for the FCC test lab & evaluates RF devices and related technologies to determine their interference risk potential and technical operating parameters. In the case of new RF technologies, develop technical standards and recommend appropriate actions. **Manages the Equipment Authorization** program; MRAs; and publishes guidance documents via the [Knowledge Database \(KDB\)](#).

Nov. 1, 2023, OET released its [Second Report & Order, Second Further Notice Of Proposed Rulemaking, And Memorandum Opinion And Order On Remand](#), ET 18-295

FCC Rulemaking Process

Administrative Procedure Act ([APA](#)) governs the process by which many federal agencies develop and issue regulations, which includes the public comment process.

The Rulemaking Process under the Administrative Procedure Act



Source: GAO. | GAO-19-483

<https://www.gao.gov/assets/gao-19-483.pdf>

FCC Rulemaking Process

Rulemaking Origin

There are several reasons why the FCC may decide to initiate the rulemaking process:

- **Statutory mandate** - Congress specifically require a rule or the initiation of the rulemaking process
- **Agency identification of a problem** - FCC identifies a problem such as industry behavior; difficulties enforcing existing rules; requests for interpretations of or exemptions from existing rules; or changes in technology causing an update to a rule
- **Petition for rulemaking** – Petition for the FCC to issue, modify, or rescind a rule

** Under the APA, rules can be challenged in court on the basis that it is arbitrary, capricious, an abuse of discretion; contrary to the Constitution or a statute; or the agency failed to follow required legal procedures. Even if a court does not overturn an agency's rule for one of these reasons, it may send the matter back for further consideration or explanation by the agency. The agency can also be sued to "compel action unlawfully withheld or unreasonably delayed."

** Under the Congressional Review Act, agencies must submit final rules to Congress. After submission, Congress can begin a process to overturn the rule. Congress can also use a variety of processes as part of its oversight of agency action, including holding hearings, issuing reports, or adopting legislation.

Rulemaking Procedure (minimum)...

Issue a notice-and-comment period for a rulemaking – FCC issues a notice of proposed rulemaking (NPRM) and provide an opportunity for public comment on the proposal before issuing a final rule.

NPRM approval and appeal elaborate procedure:

NPRM Issued

Public comment period

Reply comments

Ex parte presentations/comments

Further NPRM

Final rule (Report & Order)

Congressional Review

Petition for Recon

Request for Waiver

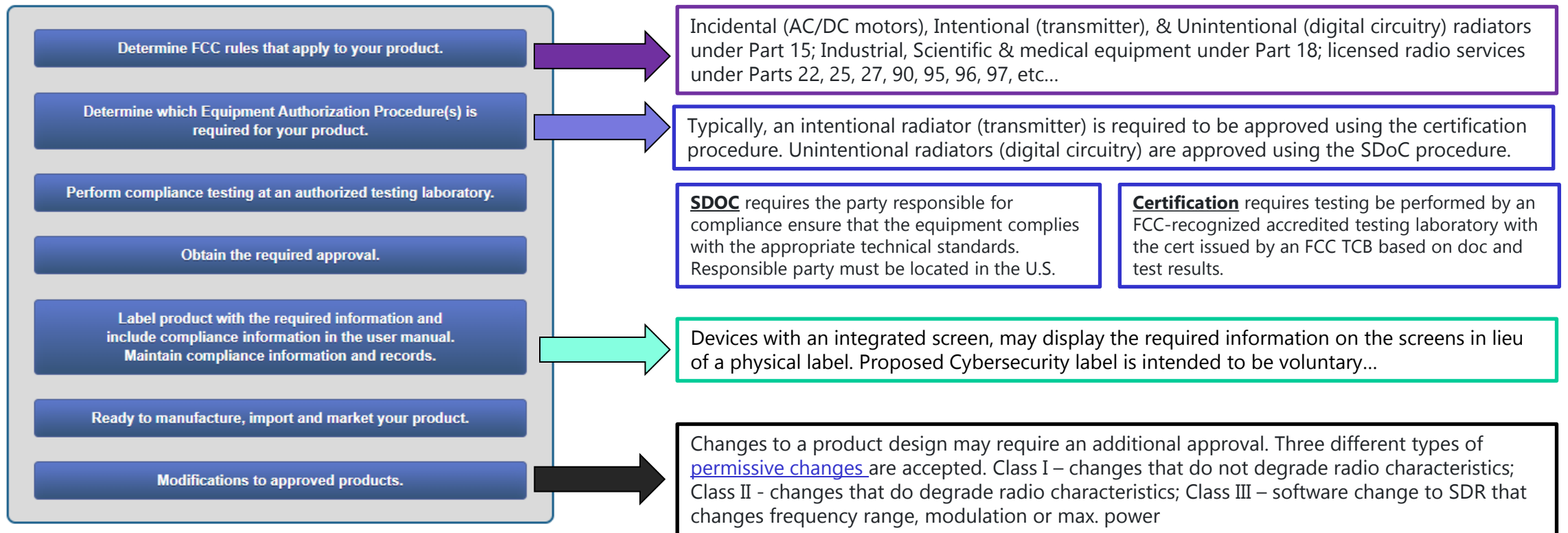
Court of Appeals

Other steps the FCC may take:

- Notices of Inquiry (NOIs). Release an NOI prior to the issuance of an NPRM to get early public comments/insights
- Public Notices (PNs). Issued to typically get comment or data on more limited issues
- Further Notices of Proposed Rulemaking (FNPRMs). Use a FNPRM to solicit public comment on a new or modified proposal and/or additional comments to focus decision or to address new/changing information
- Public meetings or hearings. Use public meetings or hearings to ask questions

FCC Type Approvals

FCC OET administers the U.S. FCC equipment authorization program. RF devices sold in or imported into the U.S. must demonstrate compliance to FCC rules in Title 47 of the Code of Federal Regulations (CFR) | [47 CFR](#)



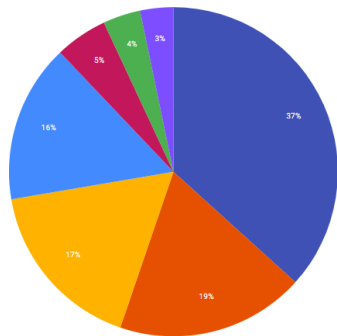
Source: [FCC Equipment Authorization](#)

FCC Enforcement

Division responsible for enforcing the provisions of the Communications Act and FCC rules & regulations

Divisions and Offices

- Enforcement comprises 7 divisions/offices
- Telecommunications Consumers Division
- Investigations & Hearings Division
- Fraud Division
- Market Disputes Resolution Division
- Office of the Field Director
- **Spectrum Enforcement Division** - takes enforcement actions against complaints primarily involving wireless equipment matters, such as electronic devices that are advertised, sold, or operated without proper authorization under the FCC's.



Informal Consumer Complaints related to radio (2023)

37% - Interference
19% - Availability
17% - Pirate Radio
16% - Indecency
5% - Commercial/Promotions
4% - Billing
3% - Equipment
Total complaints: 3,742 (2% of all complaints)

General Enforcement Areas

- *Equipment Authorization, Marketing, and Importation
- Unlicensed Operation or Operation at Variance with License
- Interference Resolution
- Unwanted Communications
- Privacy (Protection of consumer data)
- Pirate radio
- Etc....

***Post-market Surveillance**

One of the responsibilities of a Telecommunication Certification Body (TCB) is to perform appropriate post-market surveillance activities in accordance with ISO/IEC Guide 65 or ISO/IEC 17065. [TCB POST-MARKET SURVEILLANCE](#)

Start

FCC 6GHz Proceeding

Docket: [ET 18-295](#) | 2107 filings

2017: FCC Issues Notice of Inquiry

- Aug. 2017: FCC Issues NOI on mid-band opportunities

2017-2018: Early Discussions and Proposals

- Industry stakeholders begin discussions about the potential for unlicensed use in the 6GHz band.
- Technology companies advocate for more unlicensed spectrum to support Wi-Fi and other technologies.

2020: FCC Adopts New Rules

- **April 23, 2020:** The FCC adopts new rules to make 1,200 megahertz of spectrum in the 6GHz band available for unlicensed use.
- The decision includes creating a new unlicensed category called Automatic Frequency Coordination (AFC) to prevent interference with incumbent services.

2022: Implementation and Operationalization

- Manufacturers begin to introduce devices capable of operating in the 6GHz band under the new unlicensed rules (Wi-Fi 6E devices).
- The FCC continues to work on the details of the AFC system and certify AFC operators.

2018: FCC Begins Formal Proceeding

- **Oct. 2018:** The FCC OET releases a Notice of Proposed Rulemaking (NPRM) proposing to allow unlicensed use in the 6GHz band.
- Stakeholders submit comments and reply comments on the NPRM.

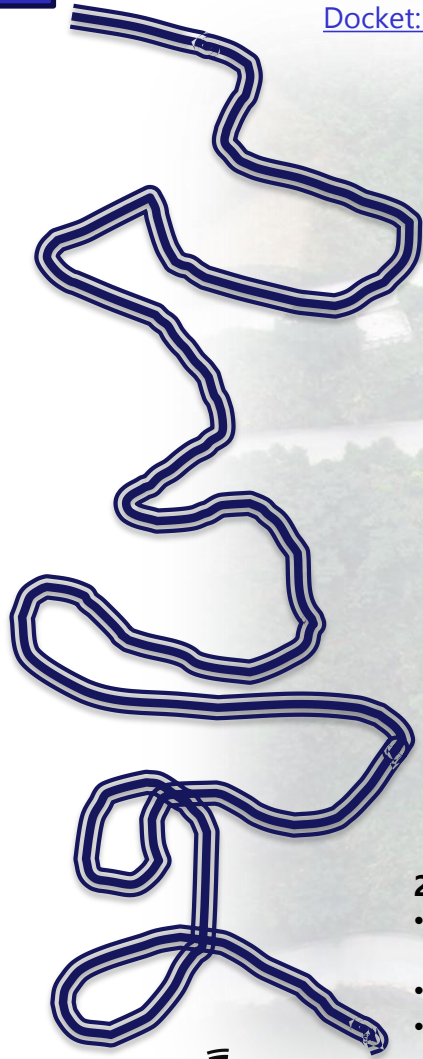
[IEEE 802.18 Comments](#), November 2018

2020-2022: Further Developments and Challenges

- Various stakeholders, including incumbent users, express concerns about potential interference and initiate court challenges against the FCC's order.
- FCC addresses various petition: Petition for Stay, Petition for Recon

2023: Expansion and Litigation

- The FCC may have further proceedings to refine rules and address ongoing concerns.
- Legal challenges to the FCC's order continue to play out in court.
- Deployment of AFC-enabled devices and services expands, pending resolution of legal and technical issues.



Finish

TOP FILING TYPES

NOTICE OF EX PARTE	1748
COMMENT	595
LETTER	145
REPLY TO COMMENTS	118
OPPOSITION	13
ERRATA, ERRATUM OR ADDENDUM	11
PUBLIC NOTICE	8
REPLY	8
REQUEST	7
OPPOSITION TO PETITION FOR RECONSIDERATION	6

TOP FILER NAMES

KEVIN MOTTUS	1311
Broadcom Inc.	148
Apple Inc.	129
Google LLC	117
Cisco Systems, Inc.	98
Microsoft Corporation	98
Hewlett Packard Enterprise	97
Qualcomm Incorporated	94
Facebook, Inc.	90
Intel Corporation	79

Mahalo!

Thanks

Gracias

谢谢

Merci

Bedankt

Note: Information contained in this submission was taken from the Federal Communications Commission's (FCC) website at www.fcc.gov and other publicly available sites. URLs are provided throughout the document for easy access to referenced sources.