



NTIA At-A-Glance

Who we are: The National Telecommunications and Information Administration (NTIA), located within the Department of Commerce, is principally responsible by law for advising the President on telecommunications and information policy issues.

What we do: NTIA is chiefly dedicated to the goals of increasing the use of spectrum by all users, expanding broadband Internet access and adoption in America, and ensuring that the Internet remains an engine for the American economy's continued innovation and growth. NTIA also represents the Executive Branch in domestic and international telecommunications policy activities, and is a leading source of research and data on the status of broadband availability and adoption in America.

NTIA highlights:

- **Spectrum Management:** NTIA manages all federally held spectrum, and works with federal agencies to ensure missions are protected while identifying new opportunities to free up spectrum for commercial use.
- **Cybersecurity:** NTIA contributes to the security of the nation's Internet architecture, through its open and transparent multistakeholder process.
- **Data Driven:** NTIA has engaged in a quarter century long partnership with the U.S. Census Bureau to track and understand how Americans use the Internet. Our Internet Use Survey data is publicly available and helps inform our policy mission.
- **Internet Governance:** NTIA represents the United States before key international bodies such as the International Telecommunications Union and the Internet Corporation for Assigned Names and Numbers. We help ensure that global standards better reflect American interests and values.
- **BroadbandUSA:** Serving as a convening authority, NTIA's BroadbandUSA program engages stakeholders in furthering the deployment and adoption of broadband technology in America. It also provides comprehensive data on state level broadband programs.
- **Public Safety:** The agency supports the Commerce Department's oversight of FirstNet, the nation's first interoperable nationwide public safety broadband network dedicated to assisting the critical missions of America's police, firefighters, emergency medical service professionals, and other first responders.
- **Institute for Telecommunication Sciences:** Located in Boulder, Colorado, ITS is NTIA's research and engineering arm, promoting new technology development and more efficient use of the radio frequency spectrum.





NTIA At-A-Glance

Doug Kinkoph

Performing the Non-Exclusive Functions and Duties of the Assistant Secretary of
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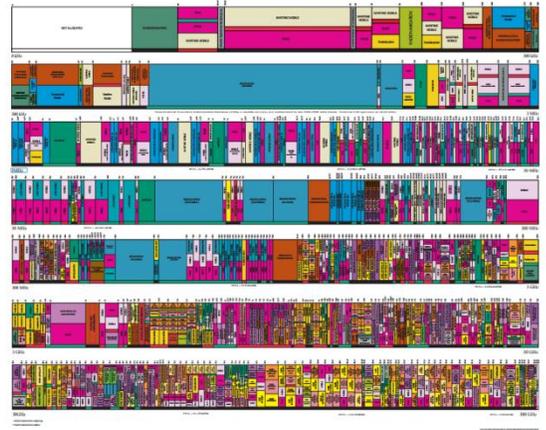
The Office of Spectrum Management (OSM) manages the use of the radio frequency spectrum by the U.S. government, balancing the needs of federal operations with state and local governments and the private sector. OSM's goal is to make available and facilitate spectrum sharing as the need for additional commercial spectrum increases.

OSM receives advice and assistance from the Interdepartment Radio Advisory Committee (IRAC), the Policy and Plans Steering Group (PPSG), and the Commerce Spectrum Management Advisory Committee (CSMAC).

OSM carries out its responsibilities by:

- ❖ Assigning frequencies to federal agencies.
- ❖ Reviewing federal agencies' new telecommunications systems and certifying that spectrum will be available.
- ❖ Establishing regulations governing federal spectrum use.
- ❖ Preparing for and participating in international radio treaty conferences.
- ❖ Coordinating plans for emergency readiness activities.
- ❖ Performing spectrum technical analyses.
- ❖ Developing automated computer capabilities needed to carry out its spectrum management activities.
- ❖ Developing innovative spectrum sharing mechanisms.

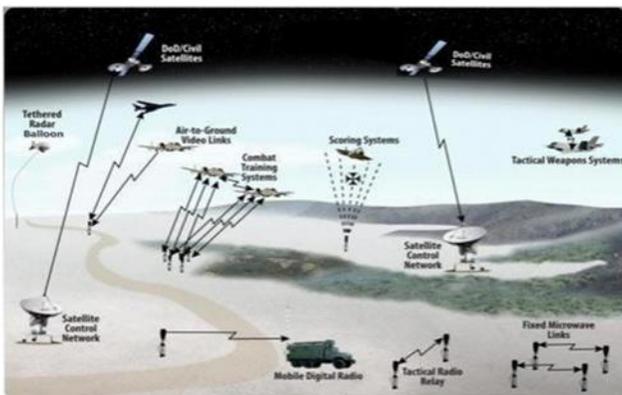
UNITED STATES FREQUENCY ALLOCATIONS THE RADIO SPECTRUM



Making Spectrum Available

NTIA, in coordination with the Federal Communications Commission (FCC), industry, and stakeholders, is dedicated to meeting the nation's growing demand for additional spectrum for wireless technologies, which includes establishing an enduring process to identify and prioritize bands for new opportunities and find additional opportunities to repurpose spectrum through the use of innovative spectrum sharing mechanisms.

NTIA, with other federal agencies, is currently implementing the Spectrum Pipeline Act of 2015 and the MOBILE NOW Act of 2018, along with the October 2018 Presidential Memorandum on Developing a Sustainable Spectrum Strategy for America's Future.





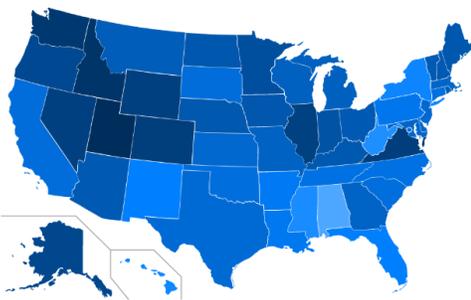
The Office of Policy Analysis and Development (OPAD) supports NTIA's role as the principal adviser to the President on telecommunications and information policy. OPAD's subject matter experts develop policies that advance security, innovation, and economic growth in the digital economy and engage in extensive interagency and stakeholder consultation.

Telecommunications Policy

Congress has charged NTIA with ensuring that the Executive Branch's views on telecommunications and information policy issues are effectively presented to the Federal Communications Commission and the Legislative Branch. Recent examples include work on telecommunications carriers' technology transition, and National Security/Emergency Preparedness planning with respect to carrier networks and services.

Cybersecurity and National Security

OPAD represents NTIA and the Department of Commerce in interagency processes on a range of cybersecurity and national security issues, including cyber strategy and response. It leads cybersecurity-focused multistakeholder processes to foster resilience in a vulnerable ecosystem, including initiatives on Internet of Things patching, software component transparency, and botnet mitigation. OPAD has also leveraged the multistakeholder process to release its first round of deliverables on a process for a software "list of ingredients" known as Software Bill of Materials (SBOM) in November 2019 to increase supply chain transparency and security.



Broadband Data and Policy

OPAD works to inform policymakers about the state of Internet use in the United States and to develop data-driven policy solutions to the digital divide. For over two decades, OPAD has produced the Internet Use Survey and Digital Nation Database, which is informed by periodic surveys of over 50,000 households conducted in partnership with the U.S. Census Bureau. OPAD's analysis of demographic disparities supports efforts to address the broadband needs of traditionally unserved and underserved

communities. For example, OPAD is co-leading a project to support more robust networks on and around Historically Black Colleges and Universities to enhance the institutions' sustainability and stimulate local economic development.

Internet and Information Policy

OPAD works to ensure a secure, open, and stable Internet through balanced privacy, free flow of data, emerging technology, and intellectual property policies. OPAD advises the White House on developing its privacy policy priorities and is an active interagency participant on a range of Internet and information policy issues. In carrying out NTIA's statutory mandate to advise the Register of Copyrights in the triennial rulemaking under Section 1201 of the Digital Millennium Copyright Act, OPAD endeavors to promote innovation and lawful access to copyrighted work.





The Office of International Affairs (OIA) formulates and promotes national telecommunications and information policies for multilateral and international organization settings like the International Telecommunications Union. OIA advocates directly with foreign government counterparts to expand international markets for U.S. commercial interest and increase access to and use of American information and communications technologies.

Policy Efforts

The office promotes a wide range of policy goals and subject matter areas and offers key support to the Department of Commerce's Internet Policy Task Force. The task force focuses on cybersecurity, privacy, the free flow of information, and online copyright protection. OIA additionally deals with intellectual property, international trade, deployment and adoption of broadband-based technologies, Internet of Things (IoT), telecommunications, satellites, and submarine cables.

Internet Governance

OIA works on issues involving the Internet's domain name system (DNS) which is a critical aspect of Internet infrastructure. OIA facilitates NTIA's representation of the U.S. government in its interactions with the Internet Corporation for Assigned Names and Numbers (ICANN) and management of the '.US' and '.EDU' top level domain names.

Expanding Access

In keeping with the Department of Commerce's overarching goal to help the American economy grow, OIA negotiates with foreign governments to increase access for American markets abroad. The office works with business, technical, academic, civil society, and interagency partners, as well as with like-minded nations, to advance U.S. policy priorities and achieve international consensus.



OIA Develops and Advances Policies by:

- ❖ Advocating for a free and open Internet
- ❖ Improving market access for U.S. industry
- ❖ Protecting the security and stability of the Internet's core infrastructure
- ❖ Promoting the free flow of information and digital services on the Internet
- ❖ Advancing multistakeholder approaches to Internet policymaking, standards development, and governance
- ❖ Supporting U.S. foreign policy goals





The Office of Telecommunications and Information Applications (OTIA) works to expand broadband connectivity and digital inclusion across America and administers the BroadbandUSA program. OTIA has extensive experience as a convening authority to engage stakeholders in furthering the deployment and use of broadband technology in America; laying the groundwork for sustainable economic growth; improving education, public safety, and health care; and advancing other national priorities.



The **BroadbandUSA** program promotes innovation and economic growth by supporting efforts to expand broadband connectivity and meaningful use for all Americans. BroadbandUSA works with stakeholders from local and state government, federal agencies, non-profits, and industry to:

- ◆ **Educate:** Arm stakeholders and broadband leaders with solution-neutral guides and tools that help them make the right decisions for their broadband initiatives.
- ◆ **Convene:** Lead regional workshops and events to advance the conversation and share lessons learned regarding broadband connectivity and digital inclusion.
- ◆ **Assist:** Provide technical assistance to communities and partners seeking neutral advice and support for their broadband projects.

Some key examples of BroadbandUSA's work include:

- ◆ **Technical Assistance:** BroadbandUSA staff provides online and direct, one-to-one and group technical assistance and training, leveraging its experience to support communities seeking public-private partnerships.
- ◆ **State Broadband Leaders Network (SBLN):** SBLN is a community of practitioners who work on state broadband initiatives. BroadbandUSA coordinates the group and convenes participants to share priorities and best practices, discuss emerging telecommunications policy issues, link state and local jurisdictions to federal agencies and funding sources, and address barriers to collaboration across states and agencies.
- ◆ **Smart Cities:** BroadbandUSA works with the National Institute of Standards and Technology on its Global City Teams Challenge by co-leading the Wireless, Smart Buildings, and Ag and Rural Superclusters.

American Broadband Initiative

(ABI): Through the ABI, OTIA works with over 25 federal agencies to leverage public assets and resources to expand our nation's broadband capacity. The core principles of the ABI are: (1) clarity, transparency, and responsiveness to stakeholders in the government process, (2) federal assets should provide the greatest possible benefit to stakeholders and the public, and (3) the federal government should be a good steward of taxpayer funds.

Minority Broadband Initiative

(MBI): The MBI was launched in November 2019. Its stated goal is to leverage the networks and location of Historically Black Colleges and Universities (HBCUs) to expand broadband coverage to underserved communities, particularly in the rural South. NTIA will use its convening authority to better ensure that HBCUs are included in broadband planning nationwide.

Broadband Availability Map: In

2018, Congress provided NTIA with funding to create a national broadband availability map in consultation with the FCC. OTIA launched the first version of the map in October 2019 for use by our federal, state, and local partners. Eight pilot states are included in the initial rollout.





The Office of Public Safety Communications (OPSC) helps NTIA meet its responsibilities under the Middle Class Tax Relief and Job Creation Act of 2012 (Act) and in other areas of critical communications. The Act established the creation of an interoperable nationwide public safety broadband network (NPSBN) through the First Responder Network Authority (FirstNet) for use by police, firefighters, emergency medical service professionals, and other public safety entities to complete their critical missions. OPSC supports the Commerce Department's oversight of FirstNet and the NPSBN, leading to improved public safety outcomes and greater support for America's first responders. OPSC also works in coordination with the National Highway Traffic Safety Administration (NHTSA) to improve the implementation of 911, Enhanced 911, and Next Generation 911 services.

OPSC oversees the following programs:

Review of FirstNet's Fees

NTIA is charged with annually reviewing and approving the fees that FirstNet assesses under specific statutory authorities. Consistent with requirements in the Act, NTIA established by rule that it will approve FirstNet's proposed fees each year if they equal, but do not exceed, the amount FirstNet needs to execute its statutory obligations in a given year. Under this review, NTIA examines all revenues and expenses FirstNet projects for the subsequent fiscal year.

Next Generation 911 (NG911)

NTIA works with NHTSA as part of the 911 Implementation and Coordination Office (ICO). In August 2019, the agencies awarded more than \$109 million in grants to 34 states and two tribal nations as part of the 911 Grant Program, which will help 911 call centers upgrade to NG911 capabilities. The funding will support improvements such as providing digital and IP network capabilities to 911 (cont.)



Credit: FirstNet

emergency call centers and will assist implementation of advanced mapping systems that will make it easier to identify a 911 caller's location. The 911 Grant Program also provides funding for training costs directly related to NG911 implementation.

State and Local Implementation Grant Program (SLIGP)

This program provides resources to assist regional, state, local, and tribal government entities as they plan for NPSBN being deployed by FirstNet. NTIA awarded \$116.5 million in grants in 2013 to 54 U.S. states and territories and provided recipients with the resources to work with stakeholders to identify needs, gaps, and priorities for public safety wireless broadband. In March 2018, NTIA awarded \$33.3 million in SLIGP 2.0 grants to 46 U.S. states and territories to continue planning for FirstNet as deployment of the NPSBN occurs. SLIGP 2.0 awards will expire on a rolling basis from March 31, 2020 to March 31, 2021.





The Institute for Telecommunication

Sciences (ITS), located in Boulder, Colorado, is the research and engineering arm of NTIA. ITS research and engineering provides the technical foundation for NTIA's policy development and spectrum management activities. ITS supports NTIA and other federal agencies in advancing the state of the art in spectrum sharing, which is required to meet growing government and commercial needs for spectrum, by:

- ❖ Performing measurements and analyses of radio frequency (RF) characteristics.
- ❖ Evaluating the electromagnetic compatibility of RF-dependent systems, including identifying, analyzing, and mitigating RF interference into mission-critical federal systems.



- ❖ ITS serves as a resource for other federal agencies, state and local governments, private corporations and associations, and international organizations. Building on a 100-year history, ITS continues to execute against a research portfolio designed to address future telecommunications challenges.
- ❖ ITS is a world leader in the development of RF propagation models used by government agencies and private industry to predict the behavior of radio waves and plan telecommunication systems.

- ❖ In support of the Federal Communications Commission (FCC), ITS developed hardware, software, and test procedures for certifying spectrum access systems and RF environmental sensing capabilities.
- ❖ NTIA, the FCC, and the Department of Defense (DoD) use ITS measurements and analyses to define exclusion zones in which commercial carriers and DoD must coordinate to ensure that commercial systems can operate and not interfere with national security systems such as air defense radars.



- ❖ ITS is pioneering spectrum monitoring systems to determine spectrum available for sharing and to monitor compliance with sharing agreements.
- ❖ With NTIA's Office of Spectrum Management (OSM), ITS performs research to determine measures of spectral efficiency.
- ❖ ITS performs research and supports standards activities to ensure interoperability of public safety communications systems and intelligibility of speech in noisy environments.
- ❖ ITS manages the Table Mountain Field Site and Radio Quiet Zone, one of only two U.S. facilities legally protected from strong radio signals, so that new spectrum-dependent systems can be tested without interference.

