



Highlights of [GAO-03-277](#), a report to Congressional requesters

TELECOMMUNICATIONS

Comprehensive Review of U.S. Spectrum Management with Broad Stakeholder Involvement Is Needed

Why GAO Did This Study

The radiofrequency spectrum—a natural resource used for wireless communications—is a critical input to various commercial and government functions. Because of expanding commercial and government demand for spectrum, there is increasing debate on how best to manage this resource to meet current and future needs. GAO was asked to examine whether future spectrum needs can be met, given the current regulatory framework; what benefits and difficulties have arisen with the application of market mechanisms to spectrum management; and what barriers exist to reforming spectrum management.

What GAO Recommends

GAO recommends that the Chairman of FCC and the Assistant Secretary of Commerce for Communications and Information, in consultation with other agencies and congressional committees, develop a plan for the establishment of an independent commission with wide representation to determine whether overarching spectrum management reform is needed. GAO received comments from FCC and NTIA stating that they would take this recommendation into consideration. Because the agencies did not specifically agree to implement our recommendation, we have added a matter for congressional consideration regarding the establishment of such an independent commission.

www.gao.gov/cgi-bin/getrpt?GAO-03-277

To view the full report, including the scope and methodology, click on the link above. For more information, contact Peter Guerrero at (202) 512-2834 or guerrero@gao.gov.

What GAO Found

In the past, the United States relied primarily on a command and control approach to spectrum management, wherein the federal government largely dictated the use of spectrum. This approach generally met commercial and government users' needs for spectrum. However, increased use of commercial wireless services, such as mobile telephones, and expanding government agency missions have created growing demand for spectrum resources. GAO found that concerns exist as to whether the current spectrum-management approach can adequately meet future needs for spectrum.

Spectrum Serves Many Commercial and Government Needs

3kHz			300GHz	
Submarine communication	Amateur radio	Broadcast TV	Mobile phone	Weather radar
AM radio	Military tactical radio	FM radio	Satellites	Military and commercial satellites
	Marine communication	Federal and public safety	Military applications	

Source: GAO.

The United States and most other countries that GAO spoke with are incrementally adopting market-based mechanisms for spectrum management. By invoking the forces of supply and demand, market-based mechanisms can help promote the efficient use of spectrum, especially in an environment with increasing and unpredictable demand. A prominent example of a market-based mechanism is the requirement for commercial spectrum users to bid at auction for the right to use spectrum. However, because of mission and system requirements, there is some question as to whether these mechanisms can or should be applied to certain government functions. Also, legal and technical limitations can, in some instances, hinder the application of these mechanisms to commercial users.

GAO found several barriers to reforming spectrum management in the United States. While active dialogue among key stakeholders is ongoing, differing priorities have led to little consensus on appropriate reforms. In addition, the current spectrum-management structure—with multiple agency jurisdictions and a slow decisionmaking process—has hindered consideration of whether fundamental reform is needed. In the past, commissions—such as the Defense Base Closure and Realignment Commission—have been used to look at major policy change when complex problems arise.