



Satellite Services Require Consistent Spectrum Policies

Satellites Use Spectrum to Provide Critical Communications

- Satellites provide secure and essential communication, navigation, weather and imaging services in the United States and around the world, often when no other means are available.
- Globally, government, media, industry and consumers rely on satellite networks to provide primary and backup communications for essential missions and mass communication. End users include Federal agencies, State and local entities, national and local media, utility, financial, retail, transportation, and numerous other industries, and millions of consumers in their homes and while on the move.
- Continued advances in satellite technology have resulted in greater overall systems capacity and higher levels of frequency reuse.
- Satellites are *the* most efficient technology for providing coverage to entire countries and large geographical and rural areas, including mobile communications to users over large geographical (including large oceanic) regions and rural areas as well as critical backhaul connectivity.
- They enable instant infrastructure at, and communications with, virtually any location on earth. As a result, satellites are often the only source of immediate and near-term communications capabilities in emergency and disaster relief situations; they are also often considered lifeline intercontinental connectivity for many developing countries; these unique satellite capabilities are critical for aeronautical and maritime services, intercontinental connectivity, and redundancy for submarine cable communications.

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Satellite Services Require Consistent Spectrum Allocations and Policies

- In order to build a viable satellite system and use the spectrum resource efficiently, operators must secure landing and operating rights in each country they seek to serve. Any uncertainty or inconsistency in satellite spectrum allocations and policies would severely curtail the ability of operators to raise the needed capital to construct, launch and operate their systems. As a result, consumers of satellite services would face higher prices, less choice among competing providers, and a reduction in the free flow of information.
- The international nature of satellite services requires complex spectrum coordination on multiple levels, often among competitors.
 - Each type of satellite service operates in frequency bands that are specifically allocated or designated domestically and/or internationally for that service's use, and each type of service has inter-system and inter-service sharing and protection criteria that are developed specifically for each Earth-to-space, space-to-Earth, and/or space-to-space spectrum allocation that it uses.
 - Satellite operators within each service are generally required under international rules and treaties to coordinate with each other, through their respective Governments, consistent with domestic and international allocations and treaty requirements.
- In order to be able to continue existing services and expand into new and innovative services, satellite operators must be able to rely on consistent spectrum allocations and policies that provide protection from interference and allow flexibility to accommodate improvements over time in technology and changing user requirements.

Policies That Recognize Long-Term Investments Are Essential

- Satellite spectrum policies must recognize and accommodate the long-term financial investment required to design, launch, and operate the space and ground segments of satellite networks. These networks also require substantial initial and continuing business planning and regulatory approvals.
- Unlike other communications networks that can be built out over time, satellite network operators and investors are required to undertake substantial up-front expense and risk to design, launch and operate their networks before they can

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realize any revenue from their investment. It can take up to 15-20 years in order to realize a meaningful return on investment.

Efficient Regulatory Regime

- Regulatory frameworks for satellite systems need to be efficient and produce timely and predictable decisions to ensure the continued upfront and considerable infrastructure investments required to deploy these networks.
- Strict FCC licensing milestones imposed on satellite licensees effectively ensure that spectrum is used efficiently, and is not warehoused. Thus, some spectrum management practices (e.g., auctions and market-based fees) applied to commercial terrestrial wireless services are unnecessary to achieve the goals of spectrum efficiency for satellite services.

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