



NEWS

Federal Communications Commission
445 12th Street, S.W.
Washington, D. C. 20554

News Media Information 202 / 418-0500
Internet: <http://www.fcc.gov>
TTY: 1-888-835-5322

This is an unofficial announcement of Commission action. Release of the full text of a Commission order constitutes official action.
See MCI v. FCC, 515 F 2d 385 (D.C. Circ 1974).

FOR IMMEDIATE RELEASE
May 21, 2003

NEWS MEDIA CONTACTS
Robin Pence (202)418-0505
Lauren Van Wazer (202)418-0030

FCC'S OFFICE OF STRATEGIC PLANNING AND POLICY ANALYSIS AND OFFICE OF ENGINEERING AND TECHNOLOGY RELEASE COMPREHENSIVE WHITE PAPER ON UNLICENSED SPECTRUM

Study Concludes Despite Downturn in Telecom Sector Unlicensed Spectrum Devices Represent Important and Growing Market, Stimulating Need for Further Regulatory Flexibility

Washington, D.C. – The Federal Communications Commission's Office of Strategic Planning and Policy Analysis (OSP) and Office of Engineering and Technology (OET) today released OSP Working Paper No. 39, "Unlicensed and Unshackled: A Joint OSP-OET White Paper on Unlicensed Devices and Their Regulatory Issues." Written by Kenneth R. Carter (OSP), Ahmed Lahjouji (OET), and Neal McNeil (OET), the paper considers all aspects of wireless devices which do not require a license from the Federal Communications Commission (FCC).

OSP periodically issues working papers on emerging issues in communications in order to stimulate debate. These papers represent the individual views of their authors and do not necessarily reflect the views of the FCC, any FCC Commissioner, or other staff.

The OSP-OET paper presents a survey of unlicensed wireless devices, their governing regulation, the current technological state of the art, an overview of the market with information from publicly available sources, and an analysis of the potential regulatory issues.

The market for unlicensed wireless communications devices is experiencing unprecedented, double-digit growth and is expected to reach \$5.2 billion of revenue by 2005 for wireless computer networking alone.

The authors conclude that much of the benefit and promise of future generations of these devices will depend upon a continued forward-looking approach to policy reform for unlicensed devices. The authors state that effective policy reform includes enabling more unlicensed spectrum, and continuing to promulgate rules to encourage

technological and market-based solutions that optimize sharing, and thus, efficient use of available spectrum.

Unlicensed wireless devices are permitted to emit radio frequency energy, without the cost and delay of a specific authorization, registration, or grant of a license. Today, millions of unlicensed devices are already in operation in a multitude of important uses for consumers, industry, medicine, government, and national defense. These devices promote consumer welfare by enabling applications not possible with wires and foster innovation in areas where obtaining a license would be overly burdensome.

The full text of the paper is available at www.fcc.gov/osp, a summary is attached. OSP contact: Kenneth Carter (202) 418-1706 or OET contact: Neal McNeil (202) 418-2408.

-FCC-

Summary of OSP Working Paper Number 39*

Unlicensed and Unshackled: A Joint OSP-OET White Paper on Unlicensed Spectrum Devices and Their Regulatory Issues

Kenneth R. Carter
Office of Strategic Planning and Policy Analysis

Ahmed Lahjouji
Office of Engineering Technology

Neal McNeil
Office of Engineering Technology

Federal Communications Commission
Washington, D.C. 20554

May 2003
OSP Working Paper No. 39

This paper presents a survey of the origins of unlicensed wireless devices, their governing regulation, the current technological state of the art, and an overview of the market using information gathered from publicly available sources. It closes with an analysis of the potential regulatory issues associated with this dynamic and growing area of communications. Applications spawned by unlicensed technology hold great promise for the American people, but may become a source of continuous change for their regulation. The FCC must continue to regularly review, reconsider, and evolve its regulatory treatment of unlicensed devices.

Unlicensed wireless devices are permitted to emit radio frequency energy, without specific authorization, registration, or grant of a license necessary to guard against harmful interference. Today, there is an estimated 348 million unlicensed devices already in operation (more than 1 per US citizen). Part 15 of the FCC's rules which govern unlicensed devices provides for several kinds of devices such as:

- Cordless phones
- Computer networking
- Sensors and controller devices
- Radio Frequency Identification (RFIDs)
- Security Systems for homes and businesses
- Baby monitors

* OSP periodically issues working papers on emerging issues in communications in order to stimulate debate. These papers represent the individual views of their authors and do not necessarily reflect the views of the FCC, any FCC Commissioner, or other staff.

- Garage door openers
- Ultra-Wideband devices

Unlicensed devices trace their origins back to 1938 when the FCC first authorized radio devices on a sufferance basis. Specifically, these sufferance operating conditions provide that Part 15 devices:

- Have no vested rights to continued operation
- May not cause harmful interference
- Must accept any interference received
- Must cease operation if notified by FCC that device is causing harmful interference

The market for unlicensed wireless communications devices is experiencing unprecedented growth – quite striking in light of the severe downturn in the U.S. telecommunications and technology sectors. The authors review this market, looking first at cordless phones which have historically been the most important segment of the market. Surpassing corded phone sales in 1997, sales of cordless phones constituted \$1.653 billion in 2002. These devices have proven to be a leading indicator of advances in technology and overcrowding in the unlicensed bands, but are now giving away that position to wireless computer networking devices – an almost unheard of technology three years ago. Sales of wireless computer networking devices have experienced double-digit annual growth since 2000 and are likely to top \$2.3 billion in 2003 and \$5.2 billion in 2005. It is also unlicensed devices such as radio frequency ids (RFIDs) which will constitute another \$1.2 billion market in 2003. These numbers are exclusive of commercial wireless networks and services. There will be an estimated 20 million Americans will be using W-LANs by 2007.

The success of unlicensed devices warrants a forward-looking review of the potential regulatory issues. Along the lines of the FCC's Spectrum Policy Task Force's central recommendation, the paper concludes that modernization of the Commission's Part 15 Rule requires a transition from the current command-and-control approach of spectrum regulation to more flexible, market-based approaches. Some ideas considered in the paper include:

- Will a receiver solution work?
- How to apply the Interference Temperature to unlicensed devices?
- Should additional spectrum be provided for unlicensed devices?
- What happens when unlicensed devices start to provide the same services as license-holders?

The paper concludes that effective policy reform includes enabling more unlicensed spectrum and promulgating rules to encourage technological and market-based solutions to optimize efficient use and sharing of spectrum. The FCC must be mindful of balancing competing interests and retain the low entry barriers that have proven so successful for unlicensed spectrum.