



NEWS

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

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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:
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NEWS MEDIA CONTACT:
Lauren Van Wazer
(202) 418-0030

The Office of Engineering and Technology
hosting
Workshop on Cognitive Radio Technologies
May 19, 2003
ET Docket No. 03-108

On May 19, 2003, the Office of Engineering and Technology will host a public workshop on cognitive radio technologies in the Commission Meeting Room. Convened by Commissioner Jonathan Adelstein, this workshop will be held in the Commission Meeting Room at the Commission's Headquarters, 445 12th Street, S.W., Washington, DC, from 9:30 am to 5:00 pm. This workshop will further pursue certain issues discussed in the Spectrum Policy Task Force Report, and will help lay the foundation for a Commission proceeding on these technologies.

The workshop is intended as a highly interactive forum among technological experts and potential users of such technologies to discuss the latest developments in this area. The goals of the workshop are: (1) to inform Commission staff and interested parties, including various spectrum users, about the potential capabilities and state of development of various cognitive radio technologies, in the short and long term, and (2) to identify potential changes to the Commission's technical rules, policies, procedures, or practices that could help facilitate the economic development of such technologies.

Cognitive radio technologies can enable a radio device and its antenna to adapt its spectrum use in response to its operating environment. As set out in the Spectrum Policy Task Force Report, they constitute one set of leading edge technologies that promise more efficient use of spectrum. Often taking advantage of the neglected "time" element associated with spectrum availability, cognitive radio technology can provide a variety of options for a radio device/antenna to identify spectrum available for use that would otherwise be unused but classed as unavailable today. Such technology exists today in a variety of military applications.

Audio/Video coverage of the meeting will be broadcast live over the Internet from the FCC's Audio/Video Events web page at www.fcc.gov/realaudio. Comments and questions can be sent to workshop panelists during the course of the workshop at OETQuestions@fcc.gov.

We request that interested parties wishing to submit comments on these topics at this point in the process do so in ET Docket No. 03-108. Written comments may be filed using the

Commission's Electronic Comment Filing System (ECFS) as an electronic file via the Internet at <http://www.fcc.gov/e-file/ecfs.html>. In completing the transmittal screen, commenters should include their full name, Postal Service mailing address, and ET Docket No. 03-108. Parties may also submit an electronic comment by Internet e-mail. To obtain filing instructions for e-mail comments, commenters should send an e-mail to ecfs@fcc.gov, and should include the following words in the body of the message: "get form <your e-mail address>." A sample form and directions will be sent in reply. Additional information on ECFS is available at <http://www.fcc.gov/e-file/ecfs.html>.

Filings may also be sent by hand or messenger delivery, by commercial overnight courier, or by first-class or overnight U.S. Postal Service mail (although we continue to experience delays in receiving U.S. Postal Service mail). The Commission's contractor, Vistrionix, Inc., will receive hand-delivered or messenger-delivered paper filings for the Commission's Secretary at 236 Massachusetts Avenue, N.E., Suite 110, Washington, D.C. 20002. The filing hours at this location are 8:00 a.m. to 7:00 p.m. All hand deliveries must be held together with rubber bands or fasteners. Any envelopes must be disposed of before entering the building. Commercial overnight mail (other than U.S. Postal Service Express Mail and Priority Mail) must be sent to 9300 East Hampton Drive, Capitol Heights, MD 20743. U.S. Postal Service first-class mail, Express Mail, and Priority Mail should be addressed to 445 12th Street, SW, Washington, D.C. 20554. All filings must be addressed to the Commission's Secretary, Office of the Secretary, Federal Communications Commission.

For further information please contact the Office of Engineering and Technology, Dr. Mike Marcus, (202) 418-2418, email Mike.Marcus@fcc.gov, or James Miller, (202) 418-7351, TTY (202) 418-2989, email James.Miller@fcc.gov.

Cognitive Radio Technologies
Workshop

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

Monday, May 19, 2003
9:30 am – 5:00 pm

Agenda

9:30 am – **Welcome** - Commissioner Jonathan S. Adelstein

9:45 am – **Introduction** - The Importance of Spectrum Access, and the Promise of Cognitive Radio Technologies: Findings from the Spectrum Policy Task Force Report – Paul Kolodzy, Stevens Institute of Technology

10:05 am – **Overview of Cognitive Radio Technologies** – Bruce Fette, General Dynamics

10:20 am - Break

Panels

Each panel will have a moderator, one or more presenters, and a set of panelists. A significant part of each panel session, however, will be set aside for active participation from members of the audience.

10:35 am - **Panel 1: Current State of Specific Cognitive Radio Technologies**, moderated by Bob Lucky

There are a number of specific cognitive radio technologies currently at various stages of development. This panel will explore in some detail the potential capabilities of those technologies and the state of their development.

Presentation on Adaptive Signal Design and Frequency-Agile Technologies – Pres Marshall, DARPA

This presentation will discuss technologies available to adjust signal design to available bandwidth and the noise/interference environment. Future frequency-agile technologies, building on today's frequency-hopping spread spectrum technology, would also increase a service's capabilities for finding available spectrum. Such technologies, implemented at base stations, could facilitate interoperable communications among handsets operating on incompatible air interfaces.

Presentation on Context-Aware Technologies, such as Geolocation-Based Systems, Listen-Before-Talk, and Interruptible Terrestrial Spectrum Technologies – Mark McHenry, Shared Spectrum

This presentation will discuss how radio devices and/or antennas could determine the availability of spectrum from geolocation information and a database of licensed operations. In addition, various listen-before-talk capabilities – with possible deployment of radiometer and feature detector technologies – are promising. Cognitive radio technologies may also further enable the provision of interruptible spectrum, in which one user has the right and ability to interrupt other uses of spectrum on a real-time basis.

Panel members:

Eric Blossom, GNU Radio
Robert Breinig, Raytheon
Michael Chartier, Intel
Nathan Cohen, Fractal Antennas
Pierre de Vries, Microsoft
Matt Rabinowitz, Rosum

12:15 pm Lunch break

2:00 pm **Panel 2: Cognitive Radio Technologies in the Public Safety/Governmental Arenas**, moderated by Nancy Jesuale, NetCity Engineering. Presentation by Michael J. Marcus, Office of Engineering and Technology, FCC

Some spectrum users may not use spectrum intensively all the time, but may have significant increases of critical use at particular points in time, or may have significant interoperability issues. Cognitive radio technologies could provide additional technical solutions to these needs, or other needs of these kinds of spectrum users. This panel will explore the needs of these spectrum users, the possible use of cognitive radio technologies to address these needs, and relevant legal issues, such as possible changes to the Commission's technical rules, policies, procedures, or practices that could help facilitate such technologies.

Panel members:

Capt. Thomas Cowper, NY State Office for Technology, NY State Police
Stephen Devine, Missouri State Highway Patrol
Mike Gallagher, NTIA
Robert Gurss, Shook, Hardy & Bacon
Bruce Oberlies, Motorola
Mark Turner, Harris Corp.
Badri Younes, Office of the Secretary of Defense

3:15 pm Break

3:30 pm – **Panel 3: Cognitive Radio Technologies in the Commercial Arena**, moderated by Scott Blake Harris, Harris, Wiltshire & Grannis. Presentation by Bill Lane, Office of Strategic Planning and Policy Analysis, FCC.

Cognitive radio technologies also hold promise for use in the provision of commercial services with spectrum-usage requirements quite different from those of public safety and similar users. For instance, cognitive radio technologies could make possible real-time secondary-market leasing. These technologies could also enable greater use of unlicensed devices in the provision of services to consumers. This panel will explore the needs of these spectrum users, the possible use of cognitive radio technologies to address these needs, and relevant legal issues, such as possible changes to the Commission’s technical rules, policies, procedures, or practices that could help facilitate such technologies.

Panel members:

Vanu Bose, Vanu, Inc.

Michele C. Farquhar, Hogan & Hartson

David Hilliard, Wiley, Rein & Fielding

Ram Ramanathan, BBN Technologies

Dipankar Raychaudhuri, WINLAB, Rutgers University

4:45 pm - **Summary Session**

5:00 pm – **Adjournment**