NEWS

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:
April 25, 2003

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The Office of Engineering and Technology
to host
<u>Workshop on Cognitive Radio Technologies</u>

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.

For further information on this workshop please contact Michael J. Marcus at (202) 418-2418 or mike.marcus@fcc.gov or Jim Schlichting at (202) 418-1547 or jim.schlichting@fcc.gov, Office of Engineering and Technology. TTY 1-888-835-5322.

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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

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9:30 am – **Welcome** - by Commissioner Adelstein, and Ed Thomas, Chief, Office of Engineering and Technology, FCC

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.

<u>Presentation on Context-Aware Technologies, such as Geolocation-Based Systems, Listen-Before-Talk, and Interruptible Terrestrial Spectrum Technologies</u> – 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 Brennig, 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:
Kwame Boakye, Harris Corp.
Rebecca Cowen-Hirsch, National Information Systems Agency, DoD{invited}
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
Dipankar Raychaudhuri, WINLAB, Rutgers University

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 William Lane, Office of Strategic Planning and Policy Analysis, FCC.

Cognitive radio technologies also hold promise for use in the provision of commercials 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:
         Suresh Balasubramanian, Macrovision
         Vanu Bose, Vanu, Inc.
         Michele C. Farquhar, Hogan & Hartson
         David Hilliard, Wiley, Rein & Fielding
         Ram Ramanathan, BB&N
         Theodore Rappaport, University of Texas

4:45 pm - **Summary Session**

5:00 pm - **Adjournment**