



OFFICE OF
THE CHAIRMAN

FEDERAL COMMUNICATIONS COMMISSION
WASHINGTON

The Honorable John D. Dingell
Chairman, Committee on Energy and Commerce
United States House of Representatives
Washington, DC 20515-6115

Re: *In the Matter of Unlicensed Operations in the TV Broadcast Bands*, ET Docket 04-168.

Dear Chairman Dingell,

Thank you for your letter dated October 24, 2008, regarding White Spaces in the Broadcast TV Bands. I appreciate your on-going concern and interest.

Detailed responses to the questions you have asked are attached. I am also including your letter as part of the record in the Commission's rulemaking proceeding on white spaces in ET Docket No. 04-186.

Please do not hesitate to contact us if you have further questions or concerns.

Sincerely,

A handwritten signature in black ink that reads "Kevin J. Martin".

Kevin J. Martin

**Responses to Questions
from
Chairman John D. Dingell**

PEER REVIEW

Q 1. The Commission's Web site acknowledges that Office of Management and Budget regulations mandate that reports containing "influential scientific information" be peer reviewed prior to release to the public. Did you subject the October 15, 2008, report entitled, *Evaluation of the Performance of Prototype TV-Band White Space Devices Phase II*, to a peer-review process? If so, when was the peer review conducted, and by whom? Did the peer-review process result in any changes to the report? If so, please identify those changes.

A1. A peer review of the report was completed on October 1, 2008. The peer review was conducted by Mary Bucher and Marty Liebman of the Wireless Telecommunications Bureau, and George Dillon, James Higgins, and Doug Miller of the Enforcement Bureau, all of whom are engineers. While the peer review panel did not raise any significant issues that resulted in changes to the report, the staff did prepare a formal response. The peer review report and the response are attached.

Q2. If you do not believe that the regulations require a peer review for the October 15, 2008, report, why then did the Commission subject the July 31, 2007, report entitled, *Evaluation of the Performance of Prototype TV-Band White Space Devices*, to a peer review process?

A2. It is not clear that the Phase II report, which summarizes results of tests conducted in public, contained the type of information that would trigger a peer review requirement. Out of an abundance of caution, however, OET nonetheless did conduct a peer review, which was completed on October 1, 2008.

Q3. If you believe that a peer-review process was not required as a matter of regulation in this case, do you agree that the public interest would be served by ensuring that the scientific data underlying this important Commission decision be as sound as possible?

A3. It is not clear that the Phase II report, which summarizes results of tests conducted in public, contained the type of information that would trigger a peer review requirement. Out of an abundance of caution, however, OET nonetheless did conduct a peer review, which was completed on October 1, 2008.

ACCOUNTABILITY

Q4. One argument in support of permitting unlicensed devices in the television white spaces is that the Commission is prepared to remedy interference problems because the Commission does so in connection with other unlicensed wireless devices. Please explain the Commission's current process for addressing reports of harmful interference in other contexts, such as those addressing "pirate radio" and cell phone jamming equipment, as well as power-level boosters.

A4. With respect to interference to consumer devices, the Commission has established a process for consumers to report such interference through use of the FCC Form 2000D. Typically, when an informal complaint is received, we would work with the consumer to identify the source of the interference and identify possible solutions for addressing the interference. *See* FCC Consumer Fact Sheet: Interference: Defining the Source. Where a consumer is unable to identify or resolve the interference, and in cases involving allegations of pirate radio operations or interference to cell phone communications, the Commission investigates to determine whether there is a rule violation. Priority is given to interference that implicates safety of life and public safety entities. Where there is a rule violation, the Commission takes whatever steps may be appropriate to correct the interference, including requiring parties to cease operation and, where necessary, seizing equipment.

Q5. How would the Commission address reports of harmful interference to free, over-the-air television signals caused by white spaces devices? If a consumer reports interference, how will the Commission identify the interfering device? If white spaces devices are sold to consumers, and then interference concerns arise, how will the Commission remove these devices from the market?

A5. The Commission expects to investigate allegations of harmful interference caused by "white space devices" in the same way that it investigates other instances of interference, as described above. The Commission would seek to identify the device causing the interference either through an inquiry to the party causing the interference, if known, or by an on-scene investigation through the use of mobile direction-finding equipment employed by our various Field Offices. To the extent a particular "white space device" is causing interference, the Commission would require additional testing to ensure that it meets the Commission equipment authorization rules. In particularly egregious instances, the Commission may initiate measures to revoke an equipment authorization.

Q6. Proponents of allowing devices to operate in the television white spaces also suggest that the Commission has experience addressing interference caused by devices that have been modified by a consumer. If a consumer modifies a wireless device (such as a wireless modem or a cell phone) in a way that makes the device non-compliant with its Commission certification or Commission regulations, and that device causes interference to other licensed users, what does the Commission do to remedy the situation?

A6. If a consumer modifies a wireless device in a way that makes the device non-compliant with its Commission certification or Commission regulations, and that device causes interference to other licensed users, the FCC would require the consumer to cease operating the device and could take additional enforcement action if the interference continued.

Q7. In what other spectrum bands do devices rely upon spectrum-sensing technologies to avoid interference? How does the Commission address issues of interference that arise in those bands?

A7. Spectrum sensing has been employed for some time by many kinds of devices, both licensed and unlicensed, for various purposes. For example, rules adopted for unlicensed personal communications devices ten years ago included a requirement for a sensing function to ensure efficient use of channels. The Commission also has adopted rules for the medical implant communications service (MICS) that require such devices to employ spectrum sensing to avoid interference from Federal weather service devices and to avoid interference with other MICS devices. The Commission also adopted rules for unlicensed devices operating in the 5 GHz band that rely on spectrum sensing to avoid causing interference to Department of Defense radars. Thus far we have not had significant reports of interference under any of these rules.

Q8. Why did the Commission decline to adopt a licensed approach to some or all of this spectrum? Does the Commission not believe that a licensed approach could help alleviate some of the accountability concerns expressed above?

A8. A wide variety of proposals were submitted into the record for use of this spectrum under licensed and unlicensed approaches. Licensed services work best where the licensee can be provided interference protection and the assurance of continued access to the spectrum. In contrast, unlicensed devices would not have interference protection rights, must avoid causing harmful interference to incumbent services, and can be designed to cope with a changing radio environment. In short, unlicensed operations would be required to avoid any disruption of the existing services.