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Congress of the United States

House of Representatives

COMMITTEE ON OVERSIGHT AND GOVERNMENT REFORM

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November 3, 2008

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Mr. Kevin J. Martin, Chairman
Federal Communications Commission
445 12th Street SW
Washington D.C. 20554

Re: "White Spaces" Unlicensed Operation in the TV Broadcast Bands (ET Docket No. 04-186)

Dear Mr. Martin:

I write in reference to the Federal Communication Commission's vote on the authorization of new unlicensed "White Spaces" devices for wireless communications in the TV Broadcast Bands, scheduled for its November 4th meeting. FCC adoption of rules to authorize use of White Spaces spectrum for wireless devices operating in the home will lead to the repeated, chronic, long-term exposure of individuals, at all age levels, and to more frequencies and quantities of radiofrequency (RF) radiation at very close range than is currently the case. Whether these exposures pose human health risks is under investigation by members of the scientific and public health research communities. I am writing to remind FCC to consider the potential for serious human health effects that could result from the proliferation of these devices in the home, before allowing the proliferation of such devices.

By design, the White Spaces devices rule will increase the bandwidth available for wireless devices operating at close range, for general use in the home and elsewhere. As a result, it is expected that the number of transmitters in the broadcast frequency range will increase exponentially with the roll out of White Spaces devices and infrastructure. The Commission has classified unlicensed broadband White Spaces devices to be used in the TV bands into two general functional categories. The first category consists of lower power "personal/ portable" unlicensed devices, such as Wi-Fi cards in laptop computers or wireless in-home local area networks (LANs). The second category consists of higher power "fixed/access" unlicensed devices that are generally operated from a fixed location and may be used to provide a commercial service such as wireless broadband Internet access. Whereas high-powered analog broadcast transmitter sites have traditionally been found at locations somewhat removed from business centers and residential neighborhoods, the new White Spaces devices that will also transmit in the digital broadcast frequencies are designed to operate at close range to members of

the public who choose to use them as well as to their colleagues and neighbors who may choose not to use them.

This proliferation of RF exposure follows the September 25, 2008 hearing before the Domestic Policy Subcommittee of the Oversight and Government Reform Committee on “Tumors and Cell Phone Use-What the Science Says,” at which witnesses raised serious concerns about the potential public health implications of RF exposures through cell phones. Some specific concerns were raised about FCC RF radiation exposure limits. Namely, they may not be adequate to protect humans from adverse biological effects; may not provide protection from long-term exposure; are only based on tissue heating reactions on a non-representative sample of the total population (a six-foot tall male); do not address the current state of scientific research establishing *non-thermal* biological effects; and do not err on the side of precaution.

While RF exposures from cell phones are different than the RF exposures that will be generated through the White Spaces auction, there is much that is unknown about the health effects of these exposures that corresponds with concerns raised in the hearing. In its 2005 Fact Sheet entitled, “Studies on Radiofrequency Radiation Emitted by Cellular Phones,” the National Toxicology Program (NTP) at the National Institute of Environmental Health Sciences states:

Over 100 million Americans currently use wireless communication devices with over 50 thousand new users daily. This translates into a potentially significant public health problem should the use of these devices even slightly increase the risk of adverse health effects. Cellular phones and other wireless communication devices are required to meet the radiofrequency radiation (RFR) exposure guidelines of the Federal Communications Commission (FCC, August 1996). The existing exposure guidelines are based on protection from acute injury from thermal effects of RFR exposure. Current data are insufficient to draw definitive conclusions concerning the adequacy of these guidelines to be protective against any non-thermal effects of chronic exposures.

In January 2008 the National Academy of Sciences (NAS) issued a report entitled: *Identification of Research Needs Relating to Potential Biological or Adverse Health Effects of Wireless Communication Devices*. The following excerpts from the NAS Report support the NTP’s conclusion that the research record upon which FCC’s RF Safety Guidelines are based does not adequately safeguard the public from non-thermal chronic exposures:

Research Needs

- 1. There is a need to characterize exposure of juveniles, children, pregnant women, and fetuses, both for personal wireless devices (e.g., cell phones, wireless personal computers, [PCs]) and for RF fields from base station antennas including gradients and variability of exposures, the environment in which devices are used, and exposures from other sources, multilateral exposures, and multiple frequencies.*

2. *Wireless networks are being built very rapidly, and many more base station antennas are being installed. A crucial research need is to characterize radiated electromagnetic fields for typical multiple-element base station antennas and for the highest radiated power conditions with measurements conducted during peak hours of the day at locations close to the antennas as well as at ground level . . .*
3. *The use of evolving types of antennas for hand-held cell phones and text messaging devices need to be characterized for the Specific Absorption Rates (SARs) that they deliver to different parts of the body so that this data is available for use in future epidemiologic studies.*
4. *RF exposure of the operational personnel close to multi-element newer base station antennas is unknown and could be high. These exposures need to be characterized. Also needed are dosimetric absorbed power calculations using realistic anatomic models for both men and women of different heights.*

(P. 5)

Most of the reported studies to date have involved one base station antenna and have used mostly homogeneous models, often of simplified circular or rectangular cross sections of the exposed human . . . In other words, the studies to date do not pertain to the commonly used multiple-element base station radiators. Also, unlike highly localized cell phone RF energy deposition, the base station exposures involve much, if not all, of the body and would have slightly different radiator origins (for multiple-element base stations) and may be multi-frequency as well, particularly if several different-frequency base station antennas are co-located. Furthermore, because of the whole-body resonance phenomenon, the SAR is likely to be higher for shorter individuals due to the closeness of the frequency/frequencies of exposure to the whole-body resonance frequency.

(P.15)

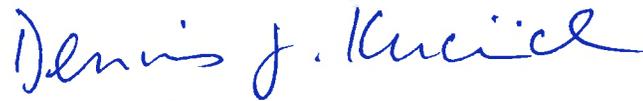
FCC has committed detailed and thorough analysis of what this White Spaces technology might do to cause interference with other commercial uses. I call upon the Commission to match its concern for commercial interests with concern for human health of the future consumers of this technology. To that end, I hereby request that the Commission stay its November 4, 2008 vote pertaining to "White Spaces" devices. In the interim, I urge you to immediately take appropriate agency action to consider what RF human exposure guidelines FCC should set to protect the health and safety of the American public before authorizing this technology to be licensed or deployed. I also request that the Commission provide my Subcommittee with a detailed description of the measures FCC has taken to date to ensure public health will not be jeopardized by the auctioning of the White Spaces spectrum, given the scientific concerns and unknowns about RF exposure and the proliferation of new RF exposures that will result.

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The Oversight and Government Reform Committee is the principal oversight committee in the House of Representatives and has broad oversight jurisdiction as set forth in House Rule X. An attachment to this letter provides information on how to respond to the Subcommittee's request. We request that you provide these documents as soon as possible, but in no case later than **5:00 p.m. on Monday, November 17, 2008**.

If you have any questions regarding this request, please contact Jaron Bourke, Staff Director, at (202) 225-6427.

Sincerely,



Dennis J. Kucinich
Chairman
Domestic Policy Subcommittee

Enclosure

cc: Darrell Issa
Ranking Minority Member

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Domestic Policy Subcommittee Document Request Instruction Sheet

In responding to the document request from the Domestic Policy Subcommittee, Committee on Oversight and Government Reform, please apply the instructions and definitions set forth below.

Instructions

1. In complying with the request, you should produce all responsive documents in your possession, custody, or control.
2. Documents responsive to the request should not be destroyed, modified, removed, transferred, or otherwise made inaccessible to the Subcommittee.
3. In the event that any entity, organization, or individual denoted in the request has been, or is currently, known by any other name than that herein denoted, the request should be read also to include them under that alternative identification.
4. Each document produced should be produced in a form that renders the document capable of being copied.
5. When you produce documents, you should identify the paragraph or clause in the Subcommittee's request to which the documents respond.
6. Documents produced in response to this request should be produced together with copies of file labels, dividers, or identifying markers with which they were associated when this request was issued. To the extent that documents were not stored with file labels, dividers, or identifying markers, they should be organized into separate folders by subject matter prior to production.
7. Each folder and box should be numbered, and a description of the contents of each folder and box, including the paragraph or clause of the request to which the documents are responsive, should be provided in an accompanying index.
8. It is not a proper basis to refuse to produce a document that any other person or entity also possesses a nonidentical or identical copy of the same document.

9. If any of the requested information is available in machine-readable or electronic form (such as on a computer server, hard drive, CD, DVD, memory stick, or computer backup tape), you should consult with Subcommittee staff to determine the appropriate format in which to produce the information.
10. The Committee accepts electronic documents in lieu of paper productions. Documents produced in electronic format should be organized, identified, and indexed electronically in a manner comparable to the organizational structure called for in (6) and (7) above. Electronic document productions should be prepared according to the following standards:
 - (a) The production should consist of single page TIF files accompanied by a Concordance-format load file, an Opticon reference file, and a file defining the fields and character lengths of the load file.
 - (b) Document numbers in the load file should match document Bates numbers and TIF file names.
 - (c) If the production is completed through a series of multiple partial productions, field names and file order in all load files should match.
11. In the event that a responsive document is withheld on any basis, you should provide the following information concerning the document: (a) the reason the document is not being produced; (b) the type of document; (c) the general subject matter; (d) the date, author, and addressee; and (e) the relationship of the author and addressee to each other.
12. If any document responsive to this request was, but no longer is, in your possession, custody, or control, you should identify the document (stating its date, author, subject and recipients) and explain the circumstances by which the document ceased to be in your possession, custody, or control.
13. If a date or other descriptive detail set forth in this request referring to a document is inaccurate, but the actual date or other descriptive detail is known to you or is otherwise apparent from the context of the request, you should produce all documents which would be responsive as if the date or other descriptive detail were correct.
14. This request is continuing in nature and applies to any newly discovered document. Any document not produced because it has not been located or discovered by the return date should be produced immediately upon location or discovery subsequent thereto.
15. All documents should be bates-stamped sequentially and produced sequentially. In the cover letter, you should include a total page count for the entire production, including both hard copy and electronic documents.

16. For paper productions, four sets of documents should be delivered: two sets to the majority staff and two sets to the minority staff. For electronic productions, one dataset to the majority staff and one dataset to minority staff are sufficient. Productions should be delivered to the majority staff in B-349B Rayburn House Office Building and the minority staff in B-350A Rayburn House Office Building. You should consult with Subcommittee staff regarding the method of delivery prior to sending any materials.
17. Upon completion of the document production, you should submit a written certification, signed by you or your counsel, stating that: (1) a diligent search has been completed of all documents in your possession, custody, or control which reasonably could contain responsive documents; and (2) all documents located during the search that are responsive have been produced to the Subcommittee or identified in a privilege log provided to the Subcommittee.

Definitions

1. The term “document” means any written, recorded, or graphic matter of any nature whatsoever, regardless of how recorded, and whether original or copy, including, but not limited to, the following: memoranda, reports, expense reports, books, manuals, instructions, financial reports, working papers, records notes, letters, notices, confirmations, telegrams, receipts, appraisals, pamphlets, magazines, newspapers, prospectuses, interoffice and intra-office communications, electronic mail (email), contracts, cables, notations of any type of conversation, telephone calls, meetings or other communications, bulletins, printed matter, computer printouts, teletypes, invoices, transcripts, diaries, analyses, returns, summaries, minutes, bills, accounts, estimates, projections, comparisons, messages, correspondence, press releases, circulars, financial statements, reviews, opinions, offers, studies and investigations, questionnaires and surveys, and work sheets (and all drafts, preliminary versions, alterations, modifications, revisions, changes, and amendments of any of the foregoing, as well as any attachments or appendices thereto). The term also means any graphic or oral records or representations of any kind (including without limitation, photographs, charts, graphs, voice mails, microfiche, microfilm, videotape, recordings and motion pictures), electronic and mechanical records or representations of any kind (including, without limitation, tapes, cassettes, disks, computer server files, computer hard drive files, CDs, DVDs, memory sticks, and recordings), and other written, printed, typed, or other graphic or recorded matter of any kind or nature, however produced or reproduced, and whether preserved in writing, film, tape, disk, videotape or otherwise. A document bearing any notation not a part of the original text is to be considered a separate document. A draft or non-identical copy is a separate document within the meaning of this term.
2. The term “documents in your possession, custody, or control” means (a) documents that are in your possession, custody, or control, whether held by you or your past or present agents, employees, or representatives acting on your behalf; (b) documents that you have a legal right to obtain, that you have a right to copy, or to which you have access; and (c) documents that you have placed in the temporary possession, custody, or control of any third party.
3. The term “communication” means each manner or means of disclosure or exchange of information, regardless of means utilized, whether oral, electronic, by document or otherwise, and whether face-to-face, in a meeting, by telephone, mail, telexes, discussions, releases, personal delivery, or otherwise.
4. The terms “and” and “or” shall be construed broadly and either conjunctively or disjunctively to bring within the scope of the request any information which might otherwise be construed to be outside its scope. The singular includes plural number, and vice versa. The masculine includes the feminine and neuter genders.
5. The terms “person” or “persons” means natural persons, firms, partnerships, associations, corporations, subsidiaries, divisions, departments, joint ventures,

proprietorships, syndicates, or other legal, business or government entities, and all subsidiaries, affiliates, divisions, departments, branches, and other units thereof.

6. The terms “referring” or “relating,” with respect to any given subject, means anything that constitutes, contains, embodies, reflects, identifies, states, refers to, deals with, or is in any manner whatsoever pertinent to that subject.