

**Before the
Federal Communications Commission
Washington, D.C. 20554**

In the Matter of)	
)	
Notice of Proposed Rulemaking)	
18 FCC Rcd 13187, 13188 ¶1 (2003))	ET Docket No. 03-137
)	
And)	
)	
Service Rules for the Advanced Wireless Services)	WT Docket No. 12-357
H Block---Implementing Section 6401 of the)	
Middle Class Tax Relief and Job Creation Act of)	
2012 Related to the 1915-1920 MHz and)	
1995-2000 MHz Bands ¶53 footnote 95)	

To: Office of the Secretary
Federal Communications Commission
Washington, DC 20554

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February 6, 2013

AFFIDAVIT OF CYRIL WILLIAM SMITH

City: Manchester, Country: England

I, Cyril William Smith, attest that my statements are true to the best of my knowledge.

Comment round for ET Docket No. 03-137 and WT Docket No. 12-357.

1. My name is: Cyril William Smith
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2. I am: Retired Academic

3. Environmental Frequencies

1. Background

In 1982, the medical director of the Breakspear Hospital in England wrote to me asking for help with the problems experienced by chemically sensitive patients who had become sensitive to their electromagnetic environment. Over the years, this work was extended to patients of other medical practitioners. We found that about 10% of patients with chemical, nutritional or particulate sensitivities had acquired electromagnetic sensitivities in addition. The symptoms provoked in these patients by the chemicals to which they had acquired a sensitivity were identical to those triggered on challenge by specific frequencies which often corresponded to those in their environment. It quickly became clear that it was frequency that mattered once some threshold of intensity had been exceeded and that frequency was patient specific. This led to the development of techniques for the measurement of such frequency signatures, first in patients and then in living systems, water and chemicals. As this work developed, there was cooperation with the Environmental Health Center, Dallas TX and it was presented at Annual Symposia in Dallas¹.

2. Coherent Frequencies

The history and understanding of the significance of coherent frequencies in biological systems is summarised in my Chapter in the Fröhlich-Festschrift². Chemicals which can H-bond to vicinal water develop a characteristic frequency signature. This means that for sensitive patients, an environmental frequency pattern which matches that of a chemical to which they have become sensitive will produce the same effect in them as that chemical. The frequency threshold occurs when the environmental signal becomes

greater than thermal noise, that is when the Watts of the radiation per cycle of the chemical resonance bandwidth exceeds thermal energy (kT). Resonances have a bandwidth given by the reciprocal of the square-root of the number of particles involved in the coherence. Bandwidths of the order of micro-Hertz have been measured. The frequency range of sensitivities encountered in patients has been found to extend from 500 micro-Hertz to 0.3 Tera-Hertz. Thus, the clinically significant environmental frequency may not be that of the carrier wave but the modulation present on it.

A consequence of coherence is that in a coherent system (such as a living system or water) frequency takes on multi-valued or fractal-like properties having no absolute value for its effects. The constant parameter becomes the coherence length giving a set of inter-connected frequencies proportional to any velocity that the system will support and in particular the velocity of light (300 Mm/s) and the velocity of coherence diffusion (~m/s). This means that frequencies related to chemical reactions can interact with microwave and biological (ELF) frequencies and vice-versa.

3. Macroscopic Quantum Systems

It was found that sensitive patients would react to the frequency of a current in a toroidal coil. Such a coil contains the magnetic **B**-field within the torus and gives an **A**-field in the surrounding space. An alternating **A**-field gives rise to an alternating electric **E**-field. The evidence for a living system having properties and reactions of a macroscopic quantum system has been presented^{3,4}. Any quantum effects carry a fundamental uncertainty which makes for difficulties in drawing up safe levels of exposure on a thermal effects basis.

4. Conclusions

The effects of the electromagnetic environment cannot be separated from those of the chemical environment. If there was not a duality between frequency and chemical structure spectroscopic analysis would be impossible. Coherence links effects related to chemical spectra to other parts of the electromagnetic spectrum. Chemicals (including pharmaceuticals) have both a chemical activity and a frequency activity. Engineers work to specifications and unless told that certain frequency patterns should be avoided, nothing will ever get done about the problem. By way of precedent, the microwave frequency of formaldehyde was kept clean for radio-astronomy.

References

1. Presentations:

International Annual Symposia on “Man and His Environment in Health and Disease” held in Dallas, Texas,

Smith CW, Choy RYS and Monro JA. *Electromagnetic Man and His Electromagnetic Environment in Health and disease*. 5th. Intl. Symp. on “Man and His Environment in

Health and Disease”, Dallas Texas, February 26 - March 1, 1987. (Choy RYS, Monro JA , Smith CW. Electrical Sensitivities in Allergy Patients. *Clinical Ecology* **4(3)**: 93-102, 1987.)

Smith CW. *The Measurement of Environmental Electromagnetic fields and the Values Effective in Triggering Responses in Hypersensitive Patients*. 6th. Intl. Symp. on “Man and His Environment in Health and Disease”, Dallas Texas, February 25-28, 1988. (Smith CW, Choy RYS, Monro JA. The Diagnosis and Therapy of Electrical Hypersensitivities. *Clinical Ecology* **6(4)**: 119-128, 1990.)

Smith CW. *Electricity and Water (Parts 1 & 2)*. 7th. Intl. Symp. on “Man and His Environment in Health and Disease”, Dallas Texas, February 23-26, 1989.

Smith CW. *Health and Hazard in the Electrical Environment*. 8th. Intl. Symp. on “Man and His Environment in Health and Disease”, Dallas Texas, February 22-25, 1990.

Smith CW. *1. Electromagnetic Fields and Health. 2. Electromagnetic Fields and Disease*. 9th. Intl. Symp. on “Man and His Environment in Health and Disease”, Dallas Texas, February 28 - March 3, 1991.

Smith CW. *Electromagnetic Fields and the Endocrine System*. 10th. Intl. Symp. on “Man and His Environment in Health and Disease”, Dallas Texas, February 27- March 1, 1992.

Smith CW. *Electrical Environmental influences on the Autonomic Nervous System*. 11th. Intl. Symp. on “Man and His Environment in Health and Disease”, Dallas Texas, February 25-28, 1993.

Smith CW. *The Electrical Aspects of Biological Cycles*. 12th. Intl. Symp. on “Man and His Environment in Health and Disease”, Dallas Texas, February 24-27, 1994.

Smith C.W. *1. Basic Bioelectricity; 2. Bioelectricity and Environmental Medicine*. 15th. Intl. Symp. on “Man and His Environment in Health and Disease: focus on the environmental aspects of EMF and bioelectricity”, Dallas Texas, February 20-23, 1997¹.

Smith C.W. *1. “The Diagnosis and Therapy of EM Hypersensitivity”; 2. “EM Fields in Health, in Therapies and Disease”*. 18th. Annual Symposium on Man and His Environment, June 8-11, 2000, Dallas, Texas. Symposium Notes for Participants.

Smith C.W. #1 “*Electromagnetic Sensitivity and the ANS*”. #2 “*ANS Involvement in Chemical and Electromagnetic Sensitivities*”. 23rd. Annual Symposium on Man and His Environment, June 9-12, 2005. Syllabus pp 162-194.

Smith CW. (2007) #1.*Electromagnetics and the ANS*, #2. *ANS Involvement in Chemical & Electromagnetic Sensitivities*. 25th Ann. Intl. Symp. Man and His Environment in Health and Disease June 7-10, 2007 Dallas, Texas. Syllabus pp. 130-156; 596-626.

Smith CW. (2010) #1. *Chemical Sensitivities in EMS Patients*, #2. *Chemical Frequency Signatures, Frequencies and Fractals*. 28th Ann. Intl. Symp. Man and His Environment in Health and Disease June 3-6, 2010 Dallas, Texas. Syllabus pp. 124-132 & 309-337.

2. Smith CW (2008) *Fröhlich's Interpretation of Biology through Theoretical Physics*. In: Hyland GJ and Rowlands P (Eds.) *Herbert Fröhlich FRS: A physicist ahead of his time*. Liverpool: University of Liverpool, 2nd edition, pp 107-154.

3. Smith C.W. Is a living system a macroscopic quantum system? *Frontier Perspectives*, 7(1), 9-15 (1998). (Presentation at Frontier Sciences Department, Temple University, Philadelphia, 1997).

4. Smith CW. (2004) Quanta and Coherence Effects in Water and Living Systems. *J Altern Complement Med*. 10(1); 69-78.

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