

## Comments on the Havas San Francisco Submission

By Harvey Kofsky

In May 2007 Dr Havas produced a document called

**“Analysis of Health and Environmental Effects of Proposed San Francisco Earthlink Wi-Fi Network” see:**

[http://www.vws.org/documents/16DrMagdaHavas\\_WiFi51pgs\\_000.pdf](http://www.vws.org/documents/16DrMagdaHavas_WiFi51pgs_000.pdf)

The purpose of the document was to advise the Board of Supervisors in regards to a proposed installation of a WIFI network. The readers of the report for the most part are lay persons who would not be expected to check the references or verify the conclusions. Dr Havas in presenting herself as an expert removed the need for the readers to delve into the intricacies of the submission.

As will be shown below, the study is flawed and biased. The danger this poses to Lay persons acting on behalf of the populace is enormous. Using ones credentials to put forth a biased study knowing full well that it may be accepted without review is morally and socially unacceptable.

In preparing this document Dr Havas had full control over the studies, and scientists whom she selected or referenced. She also has the research credentials and background in statistics to be taken seriously. How then can an ordinary person evaluate the presentation.? One way is to look for common sense items which are contradictory.

When I first looked at the presentation I noticed a major contradiction. On page 7, Dr Havas states:

*“Electrohypersensitivity (EHS) is now recognized by the World Health Organization (WHO) and is defined as:*

*“. . . a phenomenon where individuals experience adverse health effects while using or being in the vicinity of devices emanating electric, magnetic, or electromagnetic fields (EMFs). . . Whatever its cause, EHS is a real and sometimes a debilitating problem for the affected persons, while the level of EMF in their neighborhood is no greater than is encountered in normal living environments. Their exposures are generally several orders of magnitude under the limits in internationally accepted standards. “*

The actual words used by the (WHO) are as follows:

From: <http://www.who.int/mediacentre/factsheets/fs296/en/index.html>

*“EHS has no clear diagnostic criteria and there is no scientific basis to link EHS symptoms to EMF exposure. Further, EHS is not a medical diagnosis, nor is it clear that it represents a single medical problem.”*

The use of the expression “now recognized” is misleading. The statement by the WHO is a definition and not an acknowledgement. Definitions for Alchemy and Astrology can probably be found in a Scientific Dictionary but this does not mean it is accepted science.

The implication by Dr Havas that the WHO recognizes EHS as being caused by EMF is **wrong**. Consequently, further references and studies that were collated by Dr. Havas were looked at; in particular the following sections;

The first section discusses studies in Spain and Germany which examined the effects of transmission towers and their effects on the local population.

The second section discusses nine studies by Kundi et al.

The third section looks at forty studies by Dr Henry Lai.

### **The Cell Tower Studies**

The cell tower argument is based on the results of a German study by Horst Eger and a Spanish study by Santini.

*.Horst Eger, Klaus Uwe Hagen, Birgitt Lucas, Peter Vogel, Helmut Voit  
Published in Umwelt-Medizin-Gesellschaft 17,4 2004, as:” “The Influence of Being  
Physically Near to a Cell Phone Transmission Mast on the Incidence of Cancer”*

*“Santini R, Santini P, Danze JM, Le Ruz P, Seigne M. Study of the health of people living in the vicinity of mobile phone base stations: I. Influence of distance and sex. Pathol Biol (Paris) 50(6):369-373, 2002*

The German (Eger) study looked at the incidence of cancer in two groups. The first with in 400 meters of a cell mast (inner group) the second group from 400m to 1km (outer group)

Eger explained the reason for the 400 meter dividing line as follows:

*“The reason for setting a distance of 400m for the differentiation point is partly due to physical considerations, and partly due to the study of Santini et al. who chose 300m (10).*

### **The Santini Study**

It's important to note that the Santini study does not contain a reference to cancer. It was based on a questionnaire which asked people what type of medical symptoms they had and if they lived in proximity to a cell tower, radio station antennae or power line transformer. A study of this type would have some merit if the examiners were to use the home address of the respondents and correlate this with locations of transformers antennae etc. By asking leading questions Santini was assured of obtaining the results that he was looking for. I cannot accept the results of this study and was surprised that Dr Havas did not see the same flaw that I did.

### **The Eger Study**

Eger reported his findings as follows

*“The following results show clearly that inhabitants who live close to transmitter antennas compared to inhabitants, who live outside the 400m zone, double their risk of developing cancer. In addition, the average age of developing cancer was 64.1 years in the inner area whereas in the outer area the average age was 72.6 years, a **difference of***

*8.5 years. That means during the 10 year study that in the inner area (within 400 metres of the radio mast) tumors appear at a younger age. In Germany the average age of developing cancer is approximately 66.5 years, among men it is approximately 66 and among women, 67 18). “*

For illustration purposed, the 8.5 years statement is highlighted and below, the results were placed in a more familiar format.

<b>Inner area</b>	<b>Country as a whole</b>	<b>Outer area</b>
<b>64.1</b>	<b>66.5</b>	<b>72.6</b>
<b>2.4 years earlier</b>		<b>6.1 years later</b>

The author reported 8.5 years as the difference between the inner and outer areas. While the arithmetic may be correct the 8.5 year reference is meaningless. This error is also repeated on page 6 of the Havas San Francisco report.

In discussing the above results it is important to base the statistical analysis on the deviation from the mean. That is using the average onset age of 66.5 years. Variation from the mean is the only acceptable way to proceed. Looking at the results in this manner indicates that people living in the outer area have a six year advantage over the general population. Those living in the inner area are at a two year disadvantage.

There are two interpretations which can be made. The first is living in an area with low levels of RF is good for your health. The second is the study is flawed.

If you examine the results presented in Table 4 you can see there is clearly something amiss with the numbers.

No. of cases of tumours per year of study	inner area: of the 320 people		outer area: of the 647 people	
	total cases	per 1,000	total cases	per 1,000
1994	–	–	I	1.5
1995	–	–	–	–
1996	II	6.3	I	1.5
1997	I	3.1	III	4.6
1998	II	6.3	III	4.6
1999	II	6.3	I	1.5
2000	IIII	15.6	I	1.5
2001	II	6.3	II	3.1
2002	II	6.3	II	3.1
2003-3/2004	II	6.3	II	3.1

Table 4 : Summary of the total tumours occurring per year (no. and per thousand)

The first item which should cause concern occurs in the year 2000. The number (1111 5) deviates so greatly from that of the other years, it should have merited a further study on its own or at the very least, a mention. It was not mentioned, and begs the question “WHY?”

Both Eger and Havas have made a major error. The sample size is too small to be of any use. Any first year statistics student will immediately note that the numbers 1 in year 1997 actually represent a range of 1 – 1.9 You cannot compare a 1 and a 2. The correct spread is actually 1-1.9 vs 2-2.9 This error introduces a very large difference in interpretation. The plain fact is there is not enough data to draw any conclusions.

Instead of questioning the veracity of the study one should question why Dr Havas, who has an expertise in statistics chose this study. She either did not look at the results or believed no one else would. Havas wants us to accept her expertise, yet a simple read through of the Egar study causes one to question her credibility.

### **Kundi et al**

The next study that Havas references is by Kundi. Kundi looked at nine studies.

*“Kundi, M. et al. 2004. Mobile telephones and cancer--a review of epidemiological evidence. J.Toxicol. Environ Health B Crit Rev. 7(5):351-384”*

The above reference work could not be found instead an even larger study by Kundi was found which involved 33 studies

[“http://www.medscape.com/viewarticle/705187”](http://www.medscape.com/viewarticle/705187)

*The Controversy about a Possible Relationship between Mobile Phone Use and Cancer”*

The author concluded :

*“Methodologic considerations revealed that three important conditions for epidemiologic studies to detect an increased risk are not met: a) no evidence-based exposure metric is available ; b) the observed duration of mobile phone use is generally still too low ; c) **no evidence-based selection of end points among the grossly different types of neoplasias is possible because of lack of etiologic hypotheses.** Concerning risk estimates, selection bias, misclassification bias, and effects of the disease on mobile phone use could have reduced estimates, and recall bias may have led to spuriously increased risks.*

*The overall evidence speaks in favor of an increased risk, but its magnitude cannot be assessed at present because of insufficient information on long-term use.”*

The author clearly states that there is not enough evidence to draw any conclusions. Contrast this to the remarks offered by Dr Havas in which she states

*“The authors conclude that all studies with reasonable latencies found an increased cancer risk associated with mobile phone use.”*

### **Dr Henry Lai**

In Section 7 *LABORATORY AND EPIDEMIOLOGICAL STUDIES* by Dr Henry Lai Dr Havas makes the following statement.

*“All of the 40 reports, reviewed in the table above by Dr. Henry Lai, document biological effects or associations, many of them adverse or undesirable”,*

Since the report does not document the conclusions by Dr Lai, a Google search however reveals another study. His conclusions are as follows.

*Extract from the Bioinitiative Report Section 6 Page 11 EVIDENCE FOR GENOTOXIC EFFECTS (RFR AND ELF Genotoxicity)*

*“From this literature survey, since only 50% of the studies reported effects, it is apparent that there is no consistent pattern that radiofrequency radiation exposure could induce genetic damages/changes in cells and organisms. However, one can conclude that under certain conditions of exposure, radiofrequency radiation is genotoxic. Data available are mainly applicable only to cell phone radiation exposure. Other than the study by Phillips et al [1998], there is no indication that RFR at levels that one can experience in the vicinity of base stations and RF-transmission towers could cause DNA damage.”*

According to Dr Lai there is only one meaningful study.

*“<http://www.scribd.com/doc/21750937/EMF-Cell-Phone-DNA-Damage>  
“Electromagnetic fields and DNA damage J.L. Phillips\*, N.P. Singh, H. Laib*

*Whether or not EMF causes biological effects, let alone effects that are detrimental to human health and development, is a contentious issue. The literature in this area abounds with apparently contradictory studies, and as presented in this review, the literature specific to the effects of RFR exposure on DNA damage and repair in various biological systems is no exception.”*

The statement by the author speaks for itself. According to Dr Havas though you are led to believe that there is over whelming evidence of adverse effects.

### **One further Item which merited a look**

In the presentation Dr Havas references Dr Olle Johansson . The following is an extract from one of Dr Johansson’s publications.

*Electromagnetic Biology and Medicine, 25: 245–258, 2006  
Electrohypersensitivity: State-of-the-Art of a Functional Impairment  
OLLE JOHANSSON  
Department of Neuroscience, Karolinska*

*From this work, it can be noticed that people who have been smoking for many years suddenly could get lung cancer relatively short after the introduction of the FM-radio.*

In other words FM radio broadcasting is the prime mover which causes lung cancer. Can any rational person give credence to this statement.

The reason this is being brought up is to indicate that Havas once again was careless in her choice of references. The fact that she included Johansson as a reference indicates that she was either indifferent or accepted his conclusions. The major problem with Dr

Havas therefore is it appears that that she believed no one would look at the details. In this respect she is correct.

### **Concluding Remarks**

The Havas presentation contains contradictory statements , flawed studies and comments which do not necessarily agree with the facts. Based on these findings, no credibility can be given to the San Francisco presentation.