

Report

on

Workshop on “Testing and Compliance for EMF in the Mobile Industry” on Feb. 7, 2012 and International Health Conference on “Ensuring Public Health and Safety in the Mobile Industry” on Feb. 8, 2012
Organized by ASSOCHAM at New Delhi

Prepared

by

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Introduction

ASSOCHAM (Associated Chambers of Commerce & Industry of India) organized a Workshop on “Testing and Compliance for EMF in the Mobile Industry” on Feb. 7, 2012 and an International Health Conference on “Ensuring Public Health and Safety in the Mobile Industry” on Feb. 8, 2012 at New Delhi.

I got a call from Mr. Varun Aggarwal of ASSOCHAM on Feb. 2, 2012 to be in the panel discussion in the conference on Feb. 8, 2012 afternoon. He told me that a few international experts will be present in the conference and he had sent me details of the conference by email. I asked him whether they will take care of my travel expenses and answer was no. I told him that it will be difficult for me to come without travel expenses. When I checked the email in the evening, I saw that they had kept my name in the panel discussion without even taking confirmation from me. My daughter, Neha Kumar, told me that she has also got an email invitation to attend. I felt strange that they included my name in the panel without asking me and on top of that, they are not even taking care of my travel expenses. I thought if I do not go then the mobile industry people may say that we had invited Prof. Girish Kumar and even included his name in the panel discussion but he did not come because he does not want to face the international speakers. I saw the list of the speakers, consisting of Chairman, International Commission for Non-Ionizing Radiation Protection (ICNIRP), Chairman of IEEE International Committee on Electromagnetic Safety TC95, Team Leader, Radiation Programme, WHO & Head, International EMF Project, Director Research & Sustainability, GSMA and many others. So, I decided to attend and then asked Neha, if she would like to attend and she readily agreed. After that, I called Mr. Varun Aggarwal and told him that both I and Neha will attend the conference on Feb. 8, 2012. I requested him to give me a speaker slot also, so that I can present my view-points. He said he will try but cannot promise. I booked tickets for myself and Neha for Feb. 8, 2012. I told Neha that we must do our homework, prepare properly for the panel discussion and study the profiles of all the speakers.

On Feb. 3, 2012 went to Kolkata to give a presentation on cell phone/tower radiation hazards and solutions. Came back on Feb. 4, 2012 night. Checked my email on Feb. 5 and found that ASSOCHAM people have given me a speaker slot on Feb. 7 instead of Feb. 8. Also, my speaker slot was under the category of Testing & Implementation for Towers. We cancelled our tickets and re-booked for departure on Feb. 7. Went through the profiles of all the speakers and realized that all of them have been advocating that there are no health hazards associated with cell phone/tower radiation.

Workshop on “Testing and Compliance for EMF in the Mobile Industry” on Feb. 7, 2012 at Taj Mahal Hotel, New Delhi

We left Mumbai on Feb. 7, 2012 morning and reached Taj Mahal Hotel in New Delhi around 11:30 am. Inaugural Session was over and Session – I on Testing & Implementation for Towers started around 11:50 am. The session was chaired by Mr. Ram Narain, DDG Security, DOT. First speaker was Mr. Ashish Jain from Agilent, who talked about various equipment followed by Mr. Parikh, who talked about various NARDA equipment for measurement and he mentioned the importance of measurement by saying that if his father is in hospital, he will like to know whether the radiation level is safe or not. After that, Ms. Nidhi Sharma from Rohde & Schwarz, gave a presentation on portable spectrum analyzer and antenna. She also mentioned about people being concerned about health hazards of cell tower radiation and microwave oven cooking effect. One of the persons in the audience verbally attacked her asking for what proof she has about cell tower radiation and associated hazards. I had to intervene and told him that there are associated health risks and I will talk about these later on. After that, it was my turn for presentation but the chairperson Mr. Ram Narain said that since this session is on measurement technique, so where is the need for my presentation. I told him that I will talk about measurement technique, and then only he allowed me to make a presentation. Title of my presentation was cell phone/tower radiation hazards and solutions. I quickly mentioned that I had requested for a speaker slot for the next day but was given a slot in this session but I will focus my presentation on measurement technique only. I gave demo of cell tower radiation detector, DETEX-189, which is extremely portable, easy to use, and costs only Rs. 4,950/- in comparison with expensive equipment mentioned by other speakers costing upwards of Rs. 5 Lakhs. I played a video of about 2 minutes, which showed two brothers in a family in Jaipur, who got cancer and even their dog got cancer. DETEX-189 was used to measure radiation level and also showed hand held digital radiation monitor, which I mentioned will be available in a few months for Rs. 10,000. Radiation level was within ICNIRP guidelines (which claimed safe radiation density as 9.2 W/m^2 .) but based on Bio-initiative report and our interaction with several sufferers from cell tower radiation, it was very high. I mentioned about safe guidelines adopted in various countries and several health hazards occurring at levels as low as $1000 \text{ microwatts/m}^2 = 0.001 \text{ W/m}^2$ for continuous exposure. I also mentioned that ICNIRP guidelines are meant for short term exposure (averaged over 6 minutes) and not meant for long term exposure. I showed the calculation that if a person is exposed to so called safe radiation density for 24 hours, it is equivalent to putting that person in a microwave oven for 19 minutes/day! No one in the world will like to be kept in the microwave oven for 19 minutes/day. I explained the concept of energy, which is power x time, so no radiation density guidelines can be specified without taking time into account. I concluded that the measurement of radiation must be done keeping in mind that people may be exposed to this radiation for the rest of their lives, and the life span should be taken as 100 years.

My presentation led to large number of questions from foreign delegates. They kept on saying that ICNIRP guidelines are safe and have been adopted in large number of countries. The session was adjourned for lunch. The session resumed after lunch and it was now chaired by Mr. T. V. Ramachandran, Chairman, ASSOCHAM Communications Convergence Committee. Most of the foreign delegates came in the front row and they started firing questions left and right. I patiently replied their questions, which led to more counter questions, comments and replies from them. I told them about FCC guidelines of safe radiation density, which is $f/300$ averaged over 6 minutes and $f/1500$ averaged over 30 minutes, where f is transmitting frequency in MHz. When time is increased by 5 times, safe

level is reduced by 5 times. Finally, when ICNIRP Chairman, Dr. Paolo Vecchia, said that ICNIRP guidelines of radiation density of 9.2 W/m^2 is valid for 1 day, 1 year and even 100 years of exposure; I asked him, "Shall we expose you to 9.2 W/m^2 continuously for one year?". There was total silence and the session chair then intervened and said that I did not mean it. I replied that I definitely meant it and I stand with whatever I have said and mentioned about my report submitted to Secretary, DOT in Dec. 2010. The report had 30 pages and nearly 200 scientific/technical references. I also presented summary of a report entitled, "Impact of communication towers on wildlife", which was submitted by 10 eminent scientists of India to Environment Ministry, India in Oct. 2011. They had given references of 919 papers, out of which 593 papers mentioned that there is impact, 130 papers mentioned that there is no impact, and 196 papers were neutral or inconclusive. Again foreign delegates started saying that these scientists are biased and they referred more papers which showed there is impact.

(GK comments – It was extremely unfair of foreign delegates to blame the eminent scientists, which were appointed by Environment Ministry, India to write a report).

SESSION-II started one hour late at 4 pm and was chaired by Dr. R.P. Vasishtha, Consultant and Head Public Health, Govt. of Delhi. First speaker was Prof. Niels Kusters of It'Is Foundation, he mentioned that blood and fat have high dielectric constant and loss tangent compared to that of skin and bone. He also said children brain is two times more sensitive than adult brain and temperature rise of brain due to use of cell phones could be 0.1°C to 0.3°C and at other places, it could be 0.5°C to 0.6°C when exposed for 20 minutes to 1 hour. I wanted to ask him that if they tested it for a few hours but was not allowed to ask any question due to paucity of time. Next speaker was Dr. C.K. Chou, Chairman of IEEE International Committee on Electromagnetic Safety TC95. He mentioned about ICNIRP and IEEE-ICES standards for cell phones and cell towers. Dr. Michael Milligan from Mobile Manufacturers Forum talked about compliance with safety standards. He said SAR varies a lot for the same model and SAR values have different meaning. He even went on to say that average radiation from cell phones is less than Bluetooth and DECT technology!!

(GK comments – Bluetooth technology generally transmits max. peak power of 10 mW and cell phones transmit max. peak power of 1 to 2W, so average radiation from cell phones cannot be less than Bluetooth.).

Mr. Bharat Jain from BNN Communication Engineers presented details of SAR measurement using Phantom model. He mentioned that temperature rise is around 0.1°C for SAR of 1.6W/Kg but did not mention about over how much time. He also said that liquid of the phantom has to be changed everyday. Total system cost is Rs. 5.0 crores and there will be additional yearly maintenance cost.

(GK comments – there were more than 100 people in the audience and most of them were from telecom industry and there were less than 5 people representing general public. Theme of the workshop was Testing and Compliance for EMF in the Mobile Industry, so probably; it was not meant for mobile users.).

International Health Conference - Ensuring Public Health and Safety in the Mobile Industry on Feb. 8, 2012 at Hotel Leela Palace, Chanakyapuri, New Delhi

Next day, i.e., on 8th February 2012, we went to Hotel Leela Palace, New Delhi to attend International Health Conference on “Ensuring Public Health and Safety in the Mobile Industry”. The Inaugural session started at 10:30 am in the presence of Mr. Kapil Sibal, Hon’ble Union Minister, Ministry of Communications & IT, Government of India. Mr. T. V. Ramachandran, Chairman, ASSOCHAM Communications Convergence Committee, mentioned that there are nearly 5 Lakhs cell towers and 900 Million subscribers in India. Mobile technology started in 1995 and since then it is seeing exponential growth. He did mention that anything in moderation is good and excess is bad. After that, Dr. Paolo Vecchia, Chairman, ICNIRP mentioned that he has been the chairman of ICNIRP for nearly 8 years and visited 30 countries in this period. He also said that standards should be set in such a way that these should be implementable.

(**GK comments** – agreed, standards must be implementable but should not be at the cost of health of the people and environment).

Dr. CK Chou, Chairman of IEEE International Committee on Electromagnetic Safety TC95 mentioned about ICNIRP and IEEE-ICES standards. He asked why India wants to adopt SAR limits of cell phones as 1.6W/Kg instead of 2W/Kg and reduce cell towers safe radiation density as 1/10th of the ICNIRP guidelines. He was advocating one harmonized standard like one sun in the sky.

(**GK comments** – why not we adopt safest radiation level as one global standard rather than a standard, which is valid only for short term. Also, when we talk about one sun, the same sun is not present in USA when it is present in India. Even when the same sun is present in India, its effect across the length and breadth of the country is not same.)

Dr. Vijayalaxmi, Professor at Department of Radiation Oncology, University of Texas Health Science Center mentioned that she is an independent researcher and has not seen any scientific evidence of adverse effects of cell phone/tower radiation and she wants to see papers, which say there is a problem.

(**GK comments** – there are several 100’s of papers, which say there is a problem. I am not sure what type of researcher she is? One of her papers criticized published work of Prof. O.P. Gandhi, a very eminent scientist, where he had mentioned adverse effects of cell phone radiation. Without seeing this paper, how did she criticize the paper?)

She also said that she had recently gone to Jaipur, Rajasthan, and asked people to forego use of cell phones if they are concerned with radiation.

(**GK comments** – there are several advantages of cell phone technology and that’s why it has been growing exponentially in India over the last decade. However, overuse of cell phone and bad implementation of the cell tower technology, especially high transmitted power, leads to several health problems. As a researcher/scientist, it is our duty to educate people about the advantages and disadvantages of the technology).

Mr. Kapil Sibal, Hon'ble Union Minister, Ministry of Communications & IT, Government of India mentioned that science and technology provides solution but also presents health hazards. People do want to use technology but are concerned about health. Policy makers are concerned about both. More phones imply more towers and more radiation. We should side towards caution when health comes. He went on to say that what is not good for industry is good for human health.

(GK comments – some of the examples are: cigarette industry, automobile industry, chemical industry, etc.).

There was a time for question and answer. I thanked Mr. Sibal for his concern about health of the people and then asked Dr. Paolo Vecchia, Chairman, ICNIRP that he had mentioned yesterday that radiation density of 9.2 W/m^2 is safe for 1 day, 1 week, one year and even 100 years, so does he still say the same thing. Dr. Vijayalaxmi intervened in between and said that she is an independent researcher and she has noted that there is no adverse effect. I told her that the question was addressed to Chairman, ICNIRP and I want his answer but he chose not to give any reply or admit in front of the Minister. After that, Prof. Kenneth Foster from University of Pennsylvania asked Mr. Sibal why India has decided to adopt $1/10^{\text{th}}$ of the ICNIRP guidelines and why not $1/5^{\text{th}}$ or $1/20^{\text{th}}$ and whether any process was followed. Mr. Sibal was very firm in his reply that IMC (Inter-Ministerial Committee) was formed and based on their report, India has decided to adopt $1/10^{\text{th}}$ of the ICNIRP guidelines, and hence reassuring that process was followed.

(GK comments – I liked the way he said that and showed his concern about the health of the people. However, I firmly believe that India should adopt safe radiation density of 0.01 W/m^2 with immediate effect, which should be further reduced to 0.001 W/m^2 in a few years, which will give time to telecom operators to plan the network).

After that there was tea break, and after that Dr. Emilie van Deventer, Team Leader, Radiation Program, WHO & Head, International EMF Project talked to the audience through Skype. She mentioned that WHO International EMF Project was established in 1996. WHO looks after not only cancer but other health hazards. She talked about IARC and carcinogenicity of RF Electromagnetic Field report in May 2011. She also mentioned that WHO will come out with detailed report regarding RF fields in 2013 and what needs to be done. Regarding diesel generators, she said we must do environment and health risk assessment and be concerned about carbon footprint. She also spoke about risks vs. benefits.

Dr. Vijayalaxmi said she was a member of IARC (International Agency for Research in Cancer) team, which consisted of 30 scientists from 14 countries. The group met in Lyon, France from 24-31 May, 2011. They went through several reports, standards, epidemiological studies, etc. Relative risk due to RF fields from the use of mobile phones over 5 and 10 years was as follows: For Glioma, it was between 0.9 to 1.0 over 5 years, which increased to 0.9 to 1.3 over 10 years. For Acoustic Neuroma, it was between 0.9 to 1.0 over 5 years, which

increased to 1.8 to 2.3 over 10 years. Interphone study, largest international collaboration study consisting of 13 countries, mentioned increased risk for Glioma for >1640 hours cumulative use (1/2 hour per day over 8 to 10 years). She went on to say that not all the people agreed for classification under Group 2B “Possibly carcinogenic to humans”. After that, I commented that yes, all the people did not agree for classification under Group 2B as some of them wanted it to be in Group 2A “Probably carcinogenic to humans”. Regarding her claim of independent researcher, I said that most of her funding has come from US Air Force and Motorola. I asked her that in her presentation she had mentioned that there is increase in Glioma and Acoustic Neuroma cases, when people used cell phones for longer period, i.e., from 5 to 10 years, then why did she mentioned earlier that time does not play any important role. She simply repeated again that time does not play any important role.

Prof. Kenneth Foster from University of Pennsylvania dismissed Bio-Initiative report of 2007 by simply stating that they had an agenda to prove harmful effects of radiation. I replied that all the meetings, such as present one, has an agenda, that’s how we start a meeting.

(GK comments – Bio-Initiative Report was prepared by large number of eminent scientists, and prepared one of the most exhaustive reports, 610 pages long, after carefully going through extremely large number of papers. They recommended that safe cumulative radiation density for outdoor is 0.001 W/ m^2 and safe cumulative radiation density for indoor is $0.0001 \text{ W/sq.m} = 100 \text{ microWatts/m}^2$).

My daughter Neha Kumar asked Prof. Kenneth Foster about the findings of the conference on “Should children use mobile phones?” held at FGF conference, Stuttgart, Germany in Dec. 2006 and Fifth International Conference on Ethical Issues in Biomedical Engineering in New York in April 2009, where he had given a presentation. She also mentioned that to the best of her knowledge, till date there is not even one study which has proved cell phones are safe for children. To this, he hesitated and said that if parents have a concern let them not give mobile phones to their children. To which she said that it means it is not safe for children, which resulted in a stir in the audience.

Prof. Niels Kusters of It’Is Foundation talked about Wi-Fi applications, which was followed by lunch break. After lunch, Dr. Paolo Vecchia, Chairman, ICNIRP talked about SAR value of cell phone to be safe as 2W/Kg and whole body average SAR $< 0.08 \text{ W/Kg}$. For cell tower, he mentioned that at most of the places, readings are 100 to 10,000 times lower than ICNIRP guidelines. He said there are no convincing evidences of health hazards.

(GK comments – no convincing evidences does not mean no evidences. Several scientists have reported adverse health effects.).

I asked him again if the radiation density of 9.2 W/sqm is safe for 1 day, 1 week, one year and even 100 years, and this time he said that it is safe for 1 year and even 100 years. I commented that even a housewife or a teenager, who has used microwave oven, knows that if food is cooked in the microwave oven for 5 minutes or 50 minutes, there is huge difference. Surprisingly, Chairman, ICNIRP, Chairman, IEEE, Vijaylaxmi say that time of exposure

does not make difference. After that, Dr. C.K. Chou, Chairman, IEEE talked about safety standards. He mentioned about FCC OET-Bulletin 65, which clearly states that safe radiation density is $f/300$ when averaged over 6 minutes and $f/1500$ when averaged over 30 minutes. He simply said that since it is averaged over 30 minutes, that is why, value is reduced. I commented that safe limit is reduced to $f/1500$ because time of exposure is increased to 30 minutes. Again, he simply brushed aside my comment; I am not sure whether it was arrogance and/or ignorance.

After that, Dr. Jack Rowley, Director GSM Association (GSMA) made a presentation that even though safe E-field ICNIRP guideline is 41 V/m, but in Netherland, measured average value at various places was 0.38 V/m, which is only 1%; whereas in Belgium, safe E-field guideline is much lower, i.e. 3 V/m and measured average value at various places was 0.3 V/m, which is 9.5% He went on to say that even though radiation density is comparable but in Netherland, radiation level is only 1% of the guideline; whereas in Belgium, it is 9.5% of the guideline, so it will create more fear in the people.

(GK comments – If at most places, radiation level is 1% of the ICNIRP Guidelines, then why they have a problem in adopting $1/100^{\text{th}}$ of ICNIRP Guidelines. The measured average density of various places can vary drastically depending upon whether more readings are taken near base station or far away from the base station. Also, people living close to base station get exposed to very high radiation and not to the average value of radiation at various places).

Dr. Michael Milligan from Mobile Manufacturers Forum made a presentation, which was almost similar to the presentation made earlier. It became quite obvious to me that they are simply passing time and trying to brain wash people by repeating same thing again and again. I told Neha that they are going to cancel the panel discussion, for which they had specifically invited me for the conference. Neha said how that is possible, and I simply smiled. As expected, they announced that due to paucity of time, panel session is cancelled. I asked the person sitting next to me to see agenda about the panel discussion, to which all he said is, this is very bad.

Mr. T. V. Ramachandran, Chairman, ASSOCHAM Communications Convergence Committee, concluded the conference by saying that Prof. Girish Kumar says safe guidelines should be $1/100^{\text{th}}$ or lower than the ICNIRP guidelines but the experts (looking at the foreign delegates) say that ICNIRP guidelines are safe.

After the meeting, I asked one of the organizers that you have called so many foreign delegates to speak; how come you did not find a single person from India. He promptly replied, sir we have found one, and he is standing in front of me, pointing towards me. I was also told that the entire conference and workshop was sponsored by Vodafone.

CONCLUSION

There were more than 150 people in the audience and most of them were from telecom industry and there were probably only 5 people representing general public. Theme of the International Health Conference was “Ensuring Public Health and Safety in the Mobile Industry”, so where was the public?

Why ASSOCHAM invited foreign delegates from GSM Association, Mobile Manufacture forum, ICNIRP, etc., who have been saying that there is no evidence? Why they did not call researchers, like, Dr. Olle Johansson, a neuroscientist at the world-renowned Karolinska Institute, Dr. Leif Salford, who is a neurosurgeon at Lund University Hospital and Chairman of the Department of Neurosurgery, Dr. Allen H. Frey, who reported that microwaves could induce “leakage” in the barrier between the circulatory system and the brain, Dr. Alfonso Balmori, who has several publications on effect of EMF from mobile phone base station on trees and wildlife, Dr. Devra Davis and Dr. Magda Havas from Trent University, Canada or any one of the several researchers, who have found associated health effects to present balanced view-points.

It became obvious that foreign delegates had a simple agenda that if India adopts better radiation norm, then several other countries will also start demanding better radiation norm. So, let India maintain ICNIRP guidelines and let people be exposed to high radiation 24x7. Do these foreign delegates and Vodafone really care about the health of the Indian People? I have never seen any meeting conducted and concluded like this before. They had specifically invited me for the final panel discussion, and it was deliberately cancelled. The entire conference was just an eye wash.

Time has come, when people have to wake up and realize associated health hazards from cell phone and cell tower radiations. Sooner they realize, better it will be, otherwise, high radiation of cell towers will affect Millions of people, birds, animals, fruit yield of the trees, plants, and environment.

P.S. **GK comments** in the above text are my comments, which I would have liked to make but could not, and are not part of the workshop and conference.