



Phototronic Computing Increase the Speed of Computing and Eliminate Computer Generated Electromagnetic Effects on Users

Jagdev Singh, Dr. Tripatdeep Singh Dua,

Research Scholar, Dept. of Computer Science & System Studies Career Point University, Kota, India

Asst. Professor, Dept. of Computer Applications, GNIMT, Ludhiana, India

ABSTRACT: The main objective of this research is to study electromagnetic effects (EME) generated by CPU, Computer Motherboards, CRT Monitor, LCD, LED & TFT only. By studying electromagnetic effects on different type of processor, motherboards and display unit, We can improve the processing speed and it helps to improve the efficiency of the processor and reduce electromagnetic effects generated by the display unit and also helps to reduce the effect of electromagnetic interference on processing, data transmission and also help to improve the quality of the data transmission media. The research also studies the effect of Extremely Low Frequency (ELF) on computer user's health as generated by the computer and computer related peripherals. If we develop a computer which runs on photon instead of electron this is called as phototronic than we are able to increase computing speed many fold and it is also assumed that almost nil production of electromagnetic field around the computer.

KEYWORDS: Phototronic, EMR, EMF, Hz, mG, Gy, Tesla, Gauss, ELF, VLF, LWR, LHWP, LSRP, LC, LACP, epoxy

I. INTRODUCTION

Electromagnetic radiation (EMR) is the radiant energy released by certain electromagnetic processes. The electromagnetic waves that compose electromagnetic radiation can be imagined as a self-propagating transverse oscillating wave of electric and magnetic fields. EMR wave propagating from left to right. The electric field is in a vertical plane and the magnetic field in a horizontal plane. The electric and magnetic fields in EMR waves are always in phase and at 90 degrees to each other. Electromagnetic waves can be imagined as self – propagating transverse oscillating wave of electric and magnetic fields. This 3D animation shows a plane linearly polarized wave propagating from left to right. Note that the electric and magnetic fields in such a wave are in phase with each other, reaching minima and maxima together. The physics of electromagnetic radiation is Electrodynamics. Electromagnetism is the physical phenomenon associated with the theory of electrodynamics. Electric and magnetic fields obey the properties of superposition. Thus, a field due to any particular particle or time-varying electric or magnetic field contributes to the fields present in the same space due to other causes. Further, as they are vector fields, all magnetic and electric field vectors add together according to vector addition.

II. LITERATURE SURVEY

Evaluation and characterization of fetal exposures to low frequency magnetic fields generated by laptop computers. Guidelines for low frequency fields, for the model of LC presenting the higher emission, a deeper analysis was also carried out, using numerical dosimetry techniques to calculate internal quantities (current density and in-situ electric field) with reference to a digital body model of a pregnant woman. Since internal quantities have complex waveforms too, the concept of WP index was extended to them, considering the ICNIRP basic restrictions defined in the 1998 Guidelines for the current density and in the 2010 Guidelines for the in-situ electric field. The effects of simultaneous combined exposure to CDMA and WCDMA electromagnetic fields on rat testicular functions. Wireless mobile phones and other telecommunication devices are used extensively in daily life. We therefore examined the effects of combined

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exposure to radiofrequency electromagnetic fields (RF-EMF) on rat testicular function, specifically with respect to sensitive processes such as spermatogenesis. Male rats were exposed to single code division multiple access (CDMA) and wideband code division multiple access (WCDMA) RF signals for 12 weeks.

III. OBJECTIVE

IDENTIFICATION OF COMPUTER GENERATED EMF RADIATION

Computer generated electromagnetic radiation is a real health hazard. Many of us spend our working days in front of computer monitors, surrounded by electromagnetic equipment, each item emitting radiation because of duration of exposure – many hours every days (As shown in practical)



Fig 1.1 Thermal Image of Laptop showing radiation areas

This type of radiation, known as Extremely Low Frequency (ELF) is also emitted from power lines, electrical substation, TV and other electrical and electronic appliances. Another type of electromagnetic radiation found near computers is microwave radiation. Microwaves are used to provide radio communication between wireless networked equipment including computers, Printers, Modems, Routers and other cordless or Wi-Fi devices

During the practical following observations are founds in Computer Lab:-

Sr. No.	No. of P-IV Computers	Monitor 18"	Electromagnetic Force Found in (Gauss)
1	1	CRT	700 - 900 Micro Gauss
2	1	LCD	200 - 250 Micro Gauss
3	30	CRT	1800 - 2000 Micro Gauss
4	30	LCD	550 - 700 Micro Gauss
5	60	CRT	2200 - 2800 Micro Gauss
6	60	LCD	800 - 900 Micro Gauss
7	100	CRT	2800 - 3500 Micro Gauss
8	100	LCD	900 - 1000 Micro Gauss

Table 1.1: EMF produced by the Computers in Micro Gauss

HEALTH DANGERS TO THE COMPUTER USER

Electromagnetic Radiation Effects on People from everyday electronics. The technologies we use today, from our everyday appliances, Mobile phones, even our cars, emit electromagnetic radiation & EM radiation that can penetrate and affect us, seriously compromising our health and disturbing our environments. For years, scientists have conducted research linking EM radiation to serious diseases like cancer, Alzheimer's, Parkinson's and others. After an extensive review of 2,000+ such studies, the National Institute of Environmental Health Sciences concluded EMFs



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“should be regarded as possible carcinogens.” An international group of leading researchers recently came out stating, “the existing standards for public safety are completely inadequate to protect health.” Forward-thinking nations around the world are starting to set stricter EMF safety limits.

LAPTOP RADIATION & MALE INFERTILITY

The use of laptops (especially when situated on the lap near the reproductive organs) has been connected to male infertility. (Journal of Human Reproduction) Theories why include the heat from the machine itself on the scrotum, or radiation from the EMF at such a close distance. The use of laptops (especially when situated on the lap near the reproductive organs) has been connected to male infertility. Theories why include the heat from the machine itself on the scrotum, or radiation from the EMF at such a close distance. On this statement we have conducted a survey on infertility centers and nursing home, we have found following shocking results:

STUDY CONDUCTED IN INFERTILITY CENTERS AND NURSING HOME

(Age group between 30-45 years old, No of Patients 50)

Sr. No.	Industry / Fields	Number of patients	%age of patients
1	Field worker /Labor Class	03	6%
2	Defense and related field	05	10%
3	Shopkeeper and Business man	09	18%
4	Service / Administrative Class	13	26%
5	CSE/ IT / Electronics/Electrical	20	40%

Table 1.2 Shows percentage of infertility patients of different work group

This study clear cut shows that working service, related class and Computer and related fields shows that more infertility patients than other working class and it indicate that from clerk, computer operator and any other working position in the office having computer for their office daily disposals and both classes spends almost 6 to 8 or more hours daily in front of computer, this survey give clear indication that Computer having some effects on computer user health and their reproductive system. Most of the IT or IT related patient having sperm related problems such as low sperm count, high sperm mortality. This study also shows that the growth of infertility centers is also increasing many folds after year 2000 and during the growth of Computer Science and mobile phones. The growth period of fertility science, computer science and mobile phone is almost same. This growth time also give indication that there is some relationship / effects of Computer or mobile radiation on users of Computer and mobile phones. EMF Produced by Laptop Computer is 153 microtesla found at the speaker of the Laptop, 70 microtesla found at the course of the laptop and 200 microtesla found near the TV with CRT display.

STUDY CONDUCTED AT EYE CARE CENTER

(Age group below 15-25 years old, No of Patients 100)

Sr. No.	Industry / Fields	Number of patients	%age of patients
1	Field worker /Labor Class	00	0%
2	Defense and Related field	00	0%
3	Shopkeeper and Business man	06	06%
4	Service / Administrative Class	14	14%
5	Computer Science & IT sector	22	22%
6	Students Computer Sc &IT	34	34%
7	Students Humanities Group	10	10%
8	Students Science Group	14	14%

Table 1.3 Shows percentage of Eyes related problems in different work group



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This study conducted during the month of February & March 2016 at different eye care centers located in Ludhiana and it gives clear cut indications about the relationship between health of eyes of the computer users and EMF effects generated by the Computers. When I summarize this study in the form of above said table the point number 5 and 6 i.e about Computer Science / IT Sectors and Students of Computer Sc & IT (11 + 17 = 28) 28 patients from 50 patients are found from computer and related fields i.e about 56% out of the total patients. It show more than 50 % patients of eye related problems found only in IT sector below the age group 25 years old. When I summarize point no 4 in this study because service class also uses computer in their office it shows that about 70% patients in the eye care centers between the 15- 25 years old directly related with Computers and computer related fields. Both the study gives clear cut indication that there is some relationship between EMF effects generated by the computer and the health of computer user's.

IV. CONCLUSIONS & FUTURE SCOPE

The objective of this research is to identify the computer generated electromagnetic fields and their effects on computer user. Electromagnetic radiation (EMR) is energy in the waves forms emitted from electrical sources, especially by the computer and computer related electronic devices. It is interesting to investigate computer generated electromagnetic effects both on computing and on user health. Computer generated electromagnetic radiation is a real health hazard. Many of us spend our working days in front of computer monitors, surrounded by electromagnetic equipment, each item emitting radiation because of duration of exposure – many hours every day's. Most of people would not want to sit under high voltage power lines. But they will happily sit a foot away from computer screen, with a computer, printer and UPS on a desk next to them. And they will work like this for several hours a day, for many years, absorbing as much Extremely Low Frequency (ELF) radiation as if their desk was close to high voltage power line.

It is suggested and recommended that if we use **photon** as a main source of transmission of signals either inside the CPU, motherboard, and any other type of data or signal transmission circuit instead of electron than we cannot even reduce the effect of EMF but also eliminate the EMF radiation problems. Presently we use photon as a transmission unit in fiber optics cable by using electrical converter in both the end of the fiber optic wires for data transmission only but we are unable to get data or information in the form of photon, if we develop any technique or device who uses photon as a basic unit instead of electron than we are able to not even to reduce the EMF effects but also eliminate the emission of Electromagnetic waves from manmade electrical materials.

Presently we use only electronic integrated circuit but if we develop an any type phototronic or optical integrated circuits then we are able to make an computer instruction in the form of photon and these instruction can be stored and run in the form of photon not in the form of electron than we are able to not even reduce the electromagnetic effect generated by the present computer system but even we are able to compute the data at the speed of light. Present computer system is working at the speed of current i.e. vary by voltage and produce EMF. If we are able to make a computer system which use photon as a basic unit of processing of signal instead of current than this type of computer is known as a Quantum Computer or Photonic Computer. If we are able to make a quantum computer than we will able to process any signal 90% faster than the present computing system because present electric computer / current flows at only 10% of the speed of the light. The speed of the transmission through the electric current very over the distance because electric current conductor having their own resistance over the current and it is very from materials to materials

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BIOGRAPHY

Jagdev Singh is a research scholar, Department of Computer Science and system Studies with Career Point University, Kota and Dr. Tripatdeep Singh Dua working as Assistant Professor with GNIMT, Ludhiana and completed his PhD Degree from Punjab Technical University, Jalandhar