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## Abstract

- In this research we examine how omnipresence of cell phone towers has impacted human and wildlife. We begin with discussing how these cell phone towers release Radiofrequency (RF) waves, followed by highlighting dangers of these waves to humans and wildlife. We examine how RF waves has potentially played a huge role in causing cancer and other harmful diseases to humans and putting many kinds of animal species on the brink of extinction. Furthermore, we discuss the latest 5G technology innovation – how it resulted in the creation of more cell phone towers and portray the issues created by it. The research concludes with ethical arguments on attitude of cell phone towers companies, who are apparently focusing more on revenue earning than accepting the fact that cell towers are bringing serious medical problems to people, and affecting many wildlife negatively



## Introduction

- In today's fast moving and developing world it is difficult to visualize anyone without a smart phone in their pocket. It has become one of the fastest route of communication at the present time.
- So, for us to get better and faster call services companies have created many cell phone towers all around us to support those calls. As shown in Figure 1.
- However, we are unaware of the fact that cell phone towers extricate an excessive amount of harmful Radio Frequency (RF) Radiation waves. As shown in Figure 2.
- We have researched and stated out the threats associated with the cell phone RF radiation waves. We begin by discussing the harmful effects it has on human beings, wildlife, and on the environment. Our research also focuses on the new cellular network technology called the 5th generation (5G), and with it some possible concerns regarding health risk, and should we be worried about it?

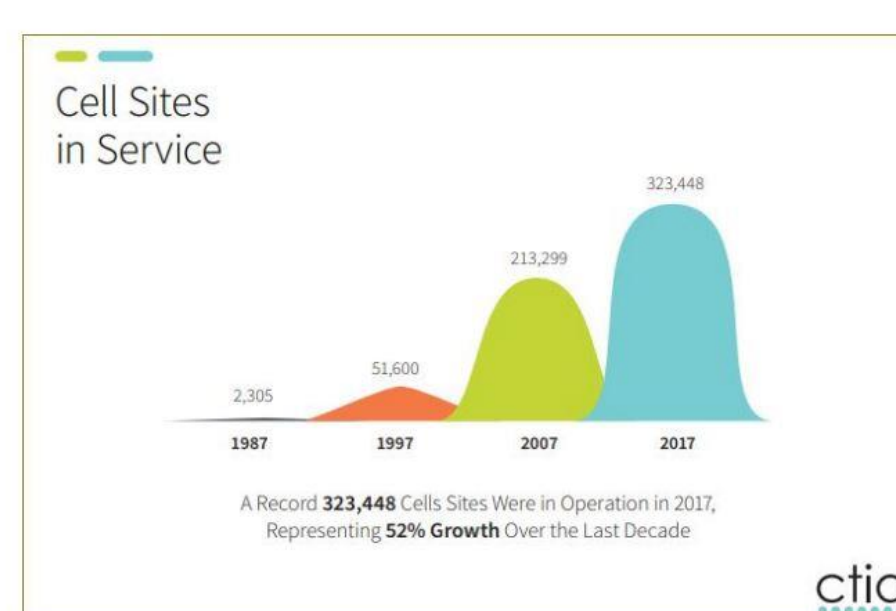


Figure 1

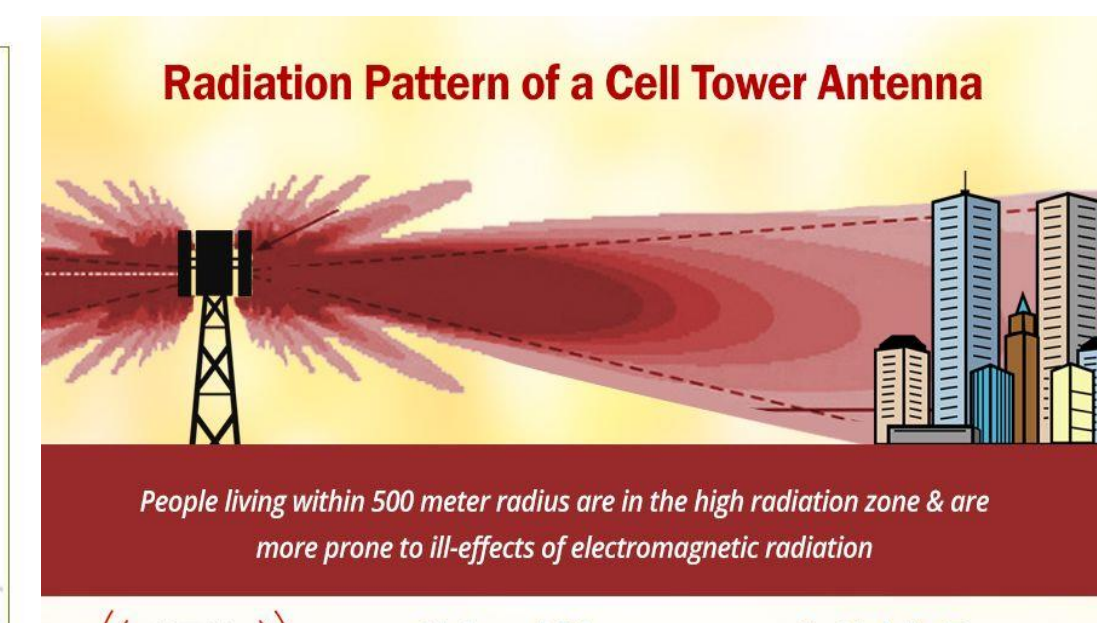


Figure 2

## Radiation Effects On Human Body

- Whenever we use our mobile phones to make a call, we are sending a signal from our end to the nearest cell phone tower. Afterwards, the cell tower receives our signal and gives it a radiofrequency channel and sent to the switching end where our call is addressed. The signal are sent from one end of cell tower to another like a bouncing ball throughout the call time. However, the radiofrequency waves which are formed at the cell phone towers are released into the environment, where people begin to get exposed to and causing various kinds of potential health problems such as headaches, memory loss, cardiovascular stress, low sperm count, birth defects and various types of cancer.
- Some other health effects that have effected people are buzzing in the head, palpitations of the heart, light-headedness, heat, visual disorders, disorders, cardiovascular problems, respiratory problems, nervousness, agitation, seizures, paralysis, psychosis, and stroke.
- In Germany those who have lived near the cell towers have been diagnosed with skin cancer, prostate cancer, breast cancer, and lung cancer.
- In London, England when a cell tower was installed at the top of an apartment building, tenants living on the top floor or became sick, and seven were diagnosed with cancer.
- In California, USA many parents urged a local elementary school to be take down a cell phone tower near the school after two children were diagnosed with rare forms of cancer.
- Kid's skulls are a lot thinner than adults, making them more susceptible to getting sick from radiation exposure. Some experts link radiation exposure, to have, ADHD, vision problems, autism, headaches, and trouble concentrating. As shown in figure below.

### Microwave Cellphone Effects

Absorption in the Brain According to Age

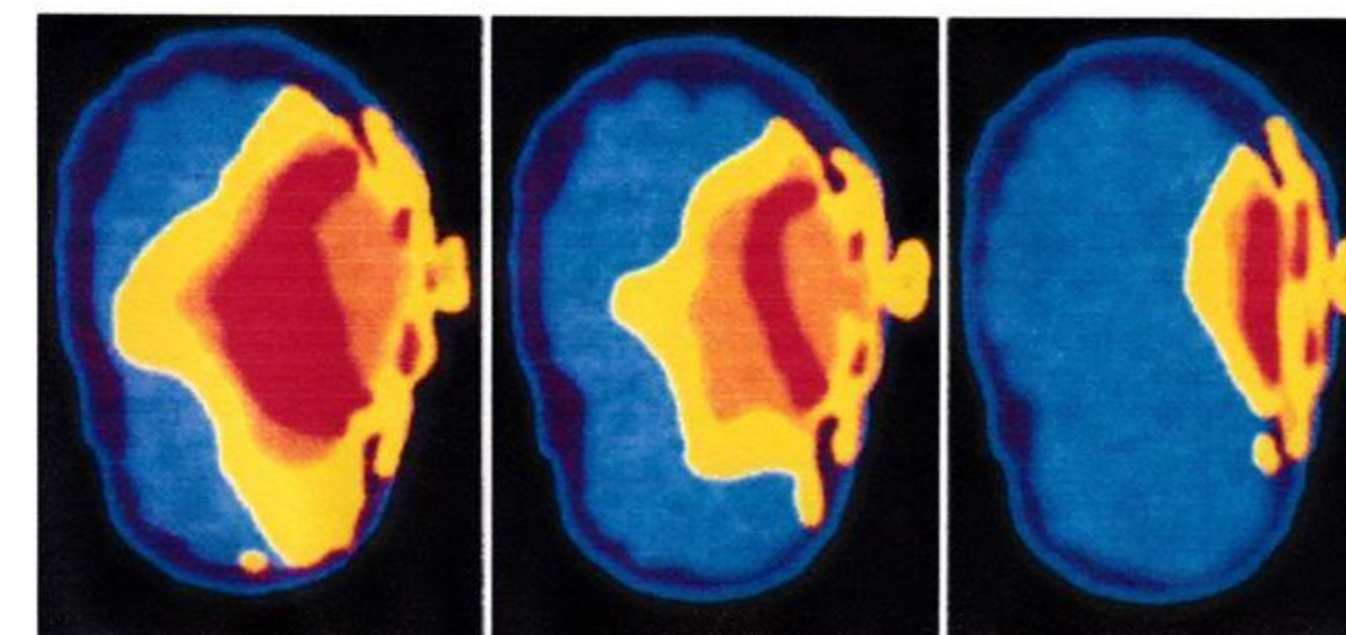


Image courtesy of Dr. Om Gandhi, University of Utah, 1996, IEE Publication



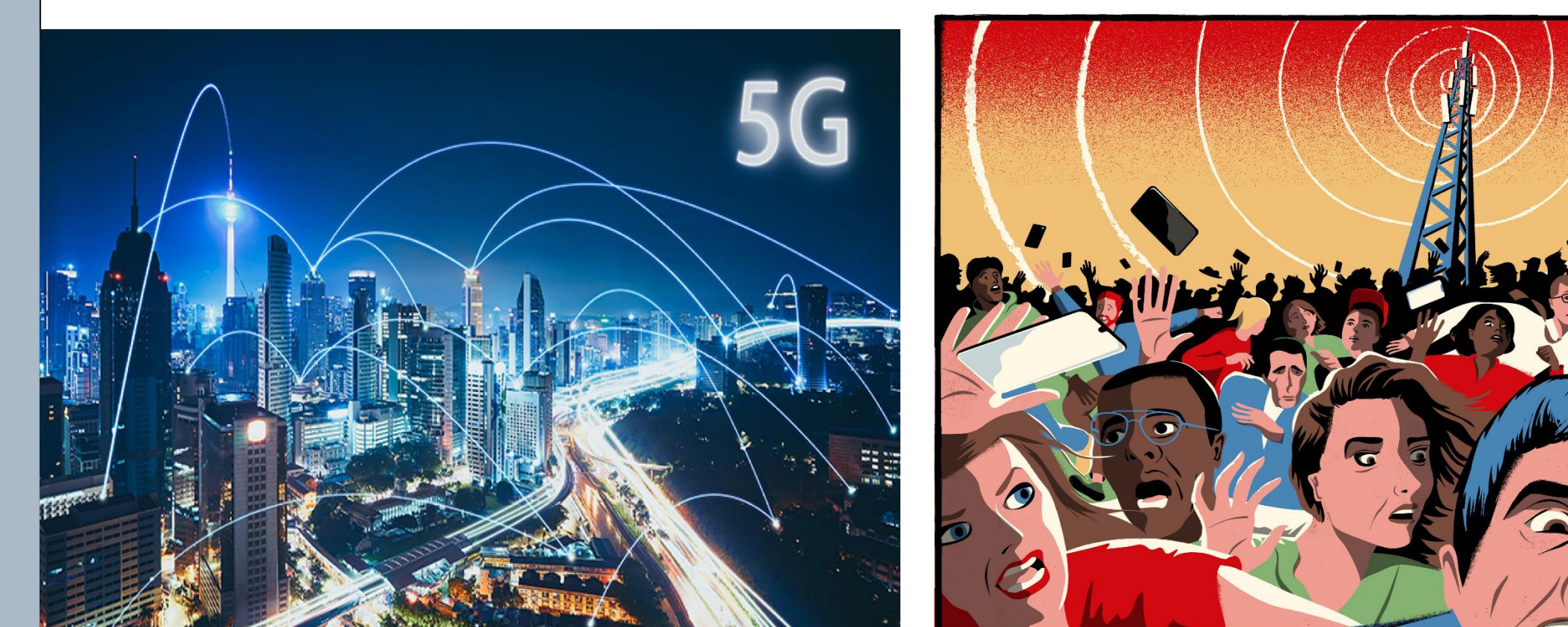
## Adverse Effects On Wildlife

- Numerous studies have researched and stated the fact that the cell phone towers are the main reason behind disappearance of many animals and birds.
- Frequent deaths in animals; such as, hamsters and guinea pigs, living near cell tower have been witnessed.
- In Spain, a study has stated that a free-tailed bat colony named, Tadarida teniotis and Pipistrellus has seen a decrease in the number of those bats.
- Chennai, India is a home to more than 200 different bird species, but recently as many as four different species of house sparrows are close to extinction.
- Migratory birds who are known to travel long distances in day or night are also effected when the radiation from cell tower interferes with their inner navigation skills causing those birds to lose direction, getting drifted away from their colonies, or crashing into many buildings.



## 5G Making It Worse

- Many companies are now coming out with 5G wireless towers that will make your internet 10x faster.
- This new wireless technology passes high-frequency waves at faster speeds, but they cannot travel that far, which is why they must put up more towers to travel further. So, now they are putting smaller cell towers close to people houses, school, signal lights and everywhere they can.
- Many house owner have also opposed this idea and said, small towers close to houses will cause many people to have cancer.
- CNET believes that the companies have not tested the safety of using millimeter wavelength for 5G technology. As it can create more health effects to people.
- 215 scientists from 40 different countries also believes that 5G towers will impact people health.



## Conclusion

Cellphones are providing us with all types of communication facilities but in return the cellphone towers are giving us various health problems as well, we have observed that human and wildlife are disturbed by the cellphone towers because of the harmful consequences. In addition, Cell phone companies will never look upon all these problems because they are busy counting their profit revenue. However, we should be familiar with all the issue regarding cell-phone towers and take some steps before it gets too late. Hence, it is important that certain rules should be implemented by government, for example construction of cell towers that should be built in rural areas or mountains and the frequency of its radiation should be kept at a minimal level, and height of towers should be kept at 200 m, so wildlife will also not be impacted by them.

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## Acknowledgment

We would like express our special gratitude to our faculty sponsor and professor, Dr. Sudip Chakraborty, and to the Department of Computer Science, for giving us this wonderful opportunity to work on this amazing topic of Negative Effects of Cell-Phone Towers on Humans and Wildlife, which helped us learn lots of wonderful and new things that we did not know before.