

# THE EFFECTS OF TRANSMISSION LINES RADIATION ON HUMAN PSYCHOLOGICAL CONDITION DUE TO BRAIN AND EMOTION USING RESONANT FIELD IMAGING (RFI)

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**Abstract.** That electric fields can produce physiological and psychological effects has been known for hundreds of years. Rightly or wrongly, the question of possible impacts of these fields has become a major factor in hearings devoted to the siting of new transmission lines. It is based from these questions of transmission lines that this paper work is made. This paper examines the effects of transmission line radiation to human psychological condition due to brain and emotion. This five-week research is made by comparing people that live or work nearby and far away from the transmission line. The measurement technique being used in this research is Resonant Field Imaging (RFI), which is an electromagnetic feedback and imaging process using a hand-held digital frequency counter. This RFI will detect the frequencies from human body then interpreted the values being observed based on Body and Head Bioenergy, Chakra Bioenergy and Brainwaves using Aura color interpretation. The results from this paper were obtained using the analysis programming tool Visual Basic (VB) in the form of graphical display. This program will show whether the person is affected or not by looking at their average percentage healthy and unhealthy psychological.

**Key Words:** RFI (Resonant Field Imaging), VB (Visual Basic)

## 1.0 INTRODUCTION

### 1.1 TRANSMISSION LINE

A transmission line is the material medium or structure that forms all part of a path from one place

to another for directing the transmission of energy. Some examples of transmission energy are electromagnetic waves or acoustic waves, as well as electric power transmission. The transmission lines components are including wires, coaxial cables, optical fibres, dielectric slabs, high frequency waveguides and high voltage distribution lines [4]. Transmission lines are use in control equipment and measurement as a means of introducing time delays and of forming pulses. Transmission lines are of many types of construction such as overhead transmission lines, subtransmission lines and underground transmission lines. It is operated in various ways according to the differing needs of electric power and communication systems. Electric power transmission is one process in the delivery of electricity to consumers and refers to the 'bulk' transfer of electrical power from place to another place [1,3]. The example of electric power transmission line is AC power transmission and High Voltage DC (HVDC) power transmission. Next, communication transmission line that also called Power Line Communication (PLC) is a wireline technology that is able to use the current electricity networks for data and voice transmission. Figure 1 below show the transmission line.



Figure 1: Transmission Lines

## 1.2 THE FIELD OF TRANSMISSION LINE

A physical description of transmission lines includes the fields that pervade the space about them. An assessment of the environmental impact of transmission lines must determine how these fields interact with and affect living things. Transmission lines generate both electric and magnetic fields. The electric field of a transmission line is directly related to the voltage of the line relative to ground and to the height and configuration of the conductors [2]. Figure 2 gives values of the ground level electric field of representative 765 kV transmission line.

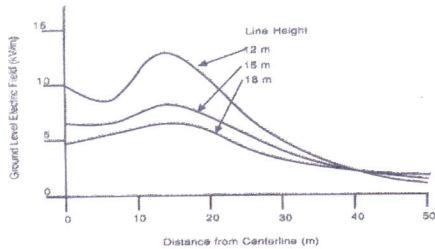


Figure 2: Ground Level Electric Fields for 765 kV Transmission Line.

The magnetic field of a transmission line is directly related to the current flowing in the conductors and to the height and configuration of the conductors. The line current depends on the load conditions and could easily change by a factor of 2 under normal conditions [2]. The magnetic field of a typical 230 kV transmission line is shown in Figure 3.

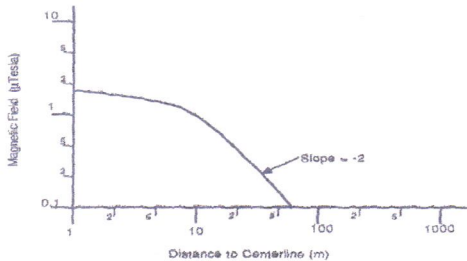


Figure 3: The Magnetic Fields of 230 kV

## 1.3 PSYCHOLOGICAL

Psychology is an academic and applied field involving the study of the mind and behavior, both human and nonhuman. Psychology also refers to the application of such knowledge to various spheres of human activity, including problems of individuals' daily lives and the treatment of mental illness. Psychology describes and attempts to explain consciousness, behavior and social interaction [8].

## 1.4 EMOTION

Emotion is a neural impulse that moves an organism to action, prompting automatic reactive behavior that has been adapted through evolution as a survival mechanism to meet a survival need. Examples of emotions are joy, anger, fear, disgust, surprise and empathy. Emotions are mental states that arise spontaneously, rather than through conscious effort. It shows physical expressions, often involuntary, related to the feelings, perceptions or beliefs about elements, objects or relations between them, in reality or in the imagination [9].

## 1.5 BRAIN

The human brain is the center of the central nervous system and volatile memory storage in humans as well as the primary control center for the peripheral nervous system. The brain controls lower or involuntary activities such as heartbeat, respiration and digestion that are known as autonomic functions. The brain also controls higher order, conscious activities, such as thought, reasoning and abstraction. For this paper, the integrated brain and prefrontal cortex analysis will be examined. Figure 4 show the human brain structure.

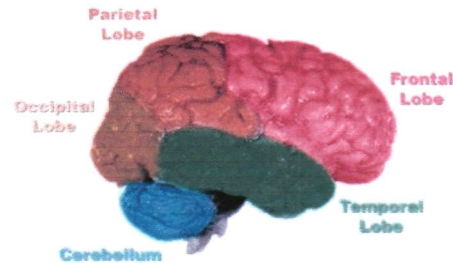


Figure 4: Human Brain Structure

The integrated brain divided to cerebral cortex, visual cortex, cerebellum, pineal body, pituitary gland, limbic system and parietal lobe.

Cerebral cortex is the outermost layer of the cerebral hemisphere which is composed of gray matter. The hemisphere is able to analyze sensory data, perform memory functions, learn new information, from thoughts and make decision. Visual Cortex is located in the occipital lobe and is the region of the brain that receives visual information from the optic nerves and processes visual information including mental imagery. Cerebellum located in the back of the brain involved in central regulation of movement, such as basic movement, balance and posture. Pineal body located near the center of brain, between the two hemispheres. The pineal gland is responsible for the

production of melatonin, which is regulated in a circadian rhythm. Pituitary gland is a small endocrine gland with anterior and posterior lobes located at the base of the skull that secretes hormones involved with urinary, reproductive and growth processes. Limbic system is a group of brain organs including the thalamus, hypothalamus and hippocampus that are important for controlling emotions and memory. Parietal lobe is located behind the frontal cortex and involved in sensory input, perception, discrimination and self-awareness. For the prefrontal cortex, it is involved in problem solving, emotion and complex thought.

### 1.6 RESONANT FIELD IMAGING (RFI)

Resonant Field Imaging is an experimental electromagnetic measurement and imaging process. It provides objective data and informative interpretations for all Auras and bioenergy fields, and identifies the type and function of bioenergies present in specific regions of the human brain. The RFI system accurately identifies and interprets 15 colors of bioenergy, representing all 15 distinguishable colors of the optical spectrum [10]. The human frequency will be measured using a hand held RFI Digital Frequency Counter as shown in Figure 5.



Figure 5: A Hand Held RFI Digital Frequency Counter

### 1.7 AURA

The description of the word aura means atmosphere of multi-colored light called "aureola" and the human aura is a multi-layered energy field that is primarily generated by the spiritual chakra energy centres, which reside within all spirit and what has been the perceived halo effect around the head is called the "numbus", also a small part of the aura is made up by electromagnetic energies that are generated by atoms within matter that give off a small energy field. The aura reflects moods, personality and traits, emotions, general well-being, spiritual abilities and evolution and is made up of several layers or bodies reflecting and relating to different chakra and aspects of our spiritual and material life and nature [10]. Figure 6 below show the aura photography. Aura color based on RFI concepts identifies and interprets 15 colors of

bioenergy such as burgundy, red, rose, orange, gold, yellow, green, cyan, gray/black, blue, navy, purple, orchid, silver and white. Unhealthy Aura colors are gray/black, red, green and orange. But, due to this research, it only three unhealthy colors involved; gray/black, orange and green which interpreted as unbalance and negative emotional and it may occurs because of the radiation. Red not include because it bring the interpretation as a material and physical focus, which is not related to radiation.

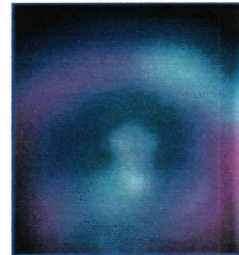


Figure 6: Aura photography

### 1.8 CHAKRA

The word "chakra" means spinning disk or wheel and each chakra is a whirling vortex of spinning energies that are made up of billions of particles of energy that resonate and vibrate at the same speed or level of vibration on a comparative frequency, therefore they cluster together to produce a spiritual chakra energy centre. The frequency of each chakra varies from one chakra to the next, as do the associated colors. Each chakra is capable of heightening or lowering its frequency by speeding up or slowing down, which changes the vibration at which it resonates energies. The chakra can spin in different directions from one to the next [11]. The seven main chakras are base chakra, sacral chakra, solar plexus chakra, heart chakra, throat chakra, third eye chakra and crown chakra. Figure 7 show the seven main chakras and Figure 8 show the chakra energy with the aura energy.

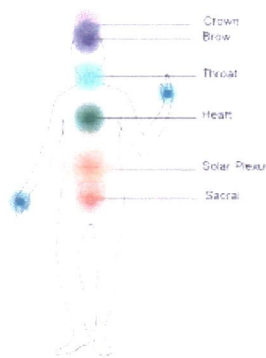


Figure 7

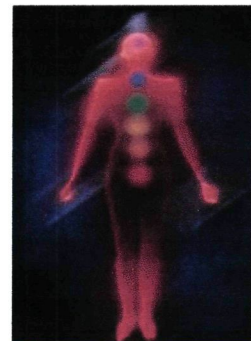


Figure 8

Figure 7: Seven Main Chakras  
Figure 8: Chakra Energy with the Aura Energy

## 2.0 PSYCHOLOGICAL AND BRAIN LEVEL

Left body bioenergy examines the seven regions that comprise the left side of the psychological level (4 – 18 inches from body) involved lower left leg, upper left leg, left hand, lower left arm, upper left arm, left side of neck and left side of head.

Right body bioenergy examines the seven regions that make up the right side of the psychological level (4 – 18 inches from body) involved lower right leg, upper right leg, right hand, lower right arm, upper right arm, right side of neck and right side of head.

Cerebral bioenergy looks at the six regions surrounding the subject's head include the left, right, and top of the head on both health (0 – 4 inches) and psychological (4 – 18 inches).

Chakra bioenergy examines the seven Chakras; include six regions placed along the central axis of the body and the Crown Chakra, which is the top of head on the psychological level.

Cerebral Cortex measured at the Throat Chakra, Visual Cortex and Pineal Body measured at Third Eye Chakra, Cerebellum at Solar Plexus Chakra, Pituitary Gland measured at Crown Chakra, Limbic System measured at Heart Chakra, Parietal Lobe at health level top of head and Prefrontal Cortex measured at the left and right side of head for health level.

## 3.0 METHODOLOGY

Questionnaire is handed out for the person involved in this research. The objectives of collecting the data from this questionnaire is to determine the background medical history, to determine either that person have any pressure and their opinion about transmission line radiation effects.

This research involved 42 people; 21 from Telekom Malaysia Berhad, Bangsar, divided to two buildings. First building is Menara Telekom which is located from 100 meters to transmission line, which also divided to several levels; Level 14, Level 1 and Level -4. Second building is TM Annexe 1 which is located within 30 meters from transmission line and also divided to several levels; Level 16 and Level 8. Next, the other 21 peoples involved are from Universiti Malaya students at Kolej 9, Petaling Jaya which is located within 5 kilometers from the transmission line. The objectives for dividing this research to

several distance is to find the comparison of living or working nearby the transmission line.

The Visual Basic programming software has been designed to generate the results, and it will display the output in the graphical form. This software will determine the frequencies entering and show the colors and its interpretation simultaneously. Next it will count the healthy and unhealthy emotional based on the color detected. The program that have been used are IF Blocks, that will allows the program to decide the frequencies entering either is in healthy or unhealthy color based on whether the condition is true or false. Next, is Array program, which will allow the program to evaluate the percentage of the healthy and unhealthy emotion for each bioenergies and evaluate the average percentage for all measurement and display it into graphical. Figure 8 below show the example of the output for Visual Basic programming.

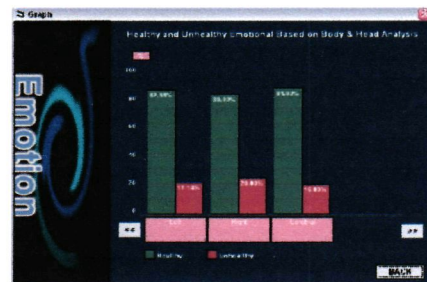


Figure 8: Visual Basic Software Output

## 4.0 DATA ANALYSIS

### 4.1 RESULT 1

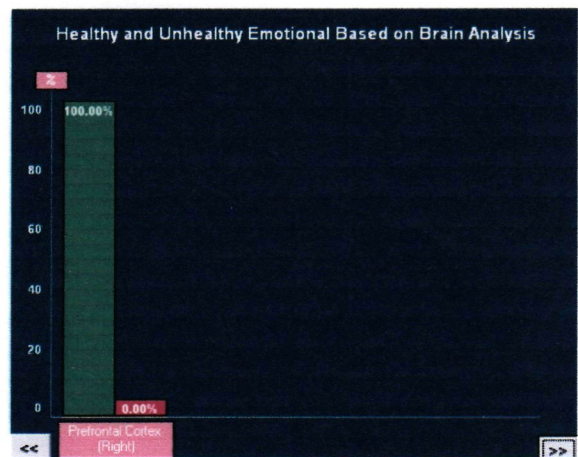
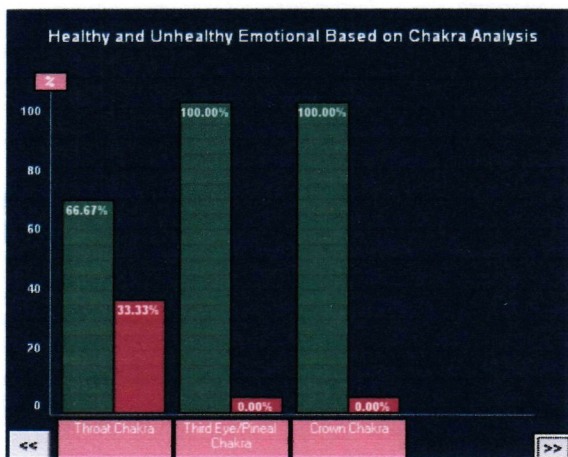
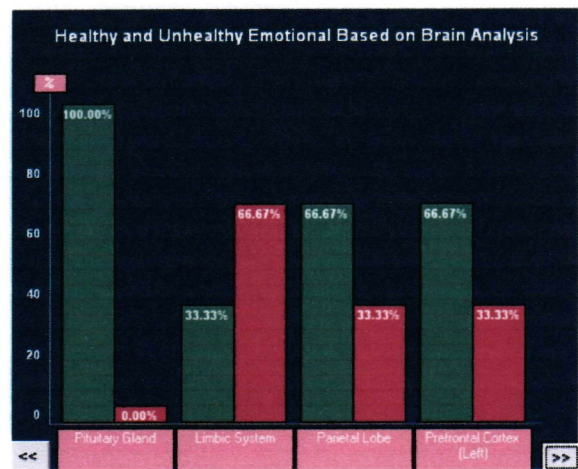
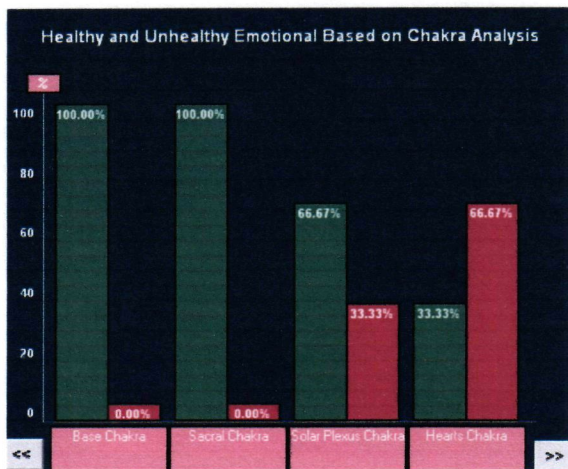
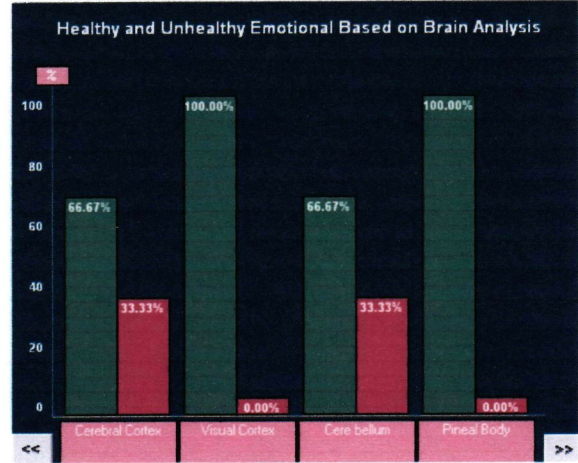
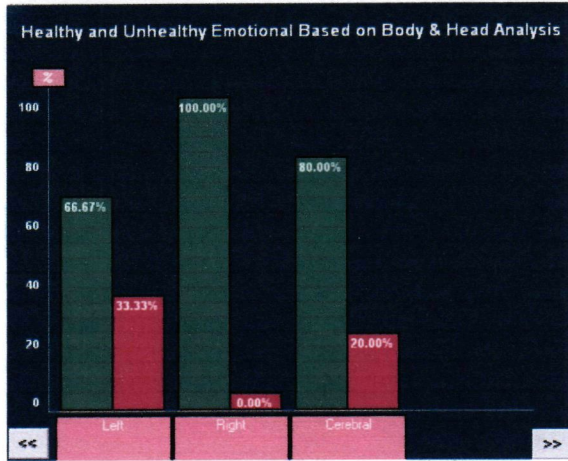


Figure 10: The Results for Sample 1 from Menara Telekom at Level 14

## 4.2 RESULT 2

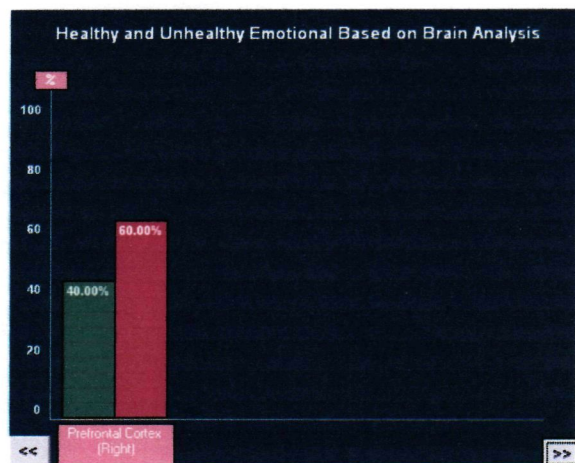
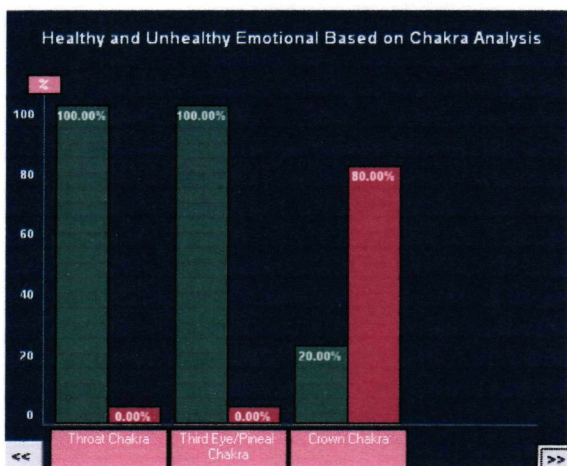
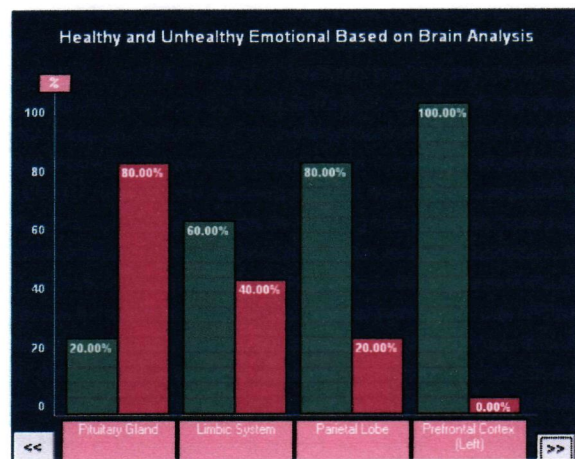
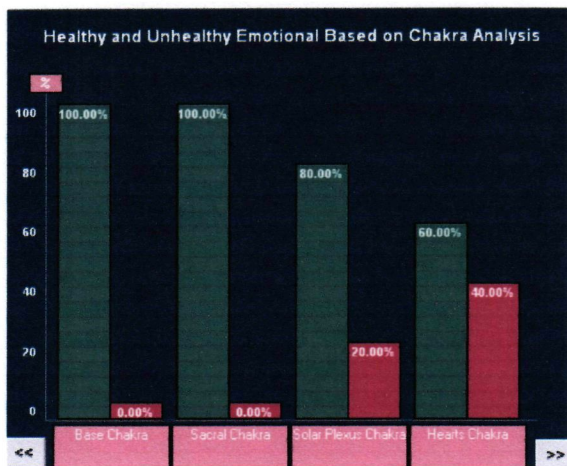
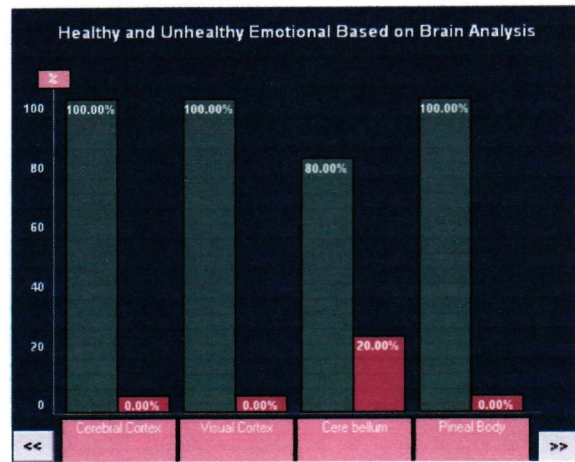
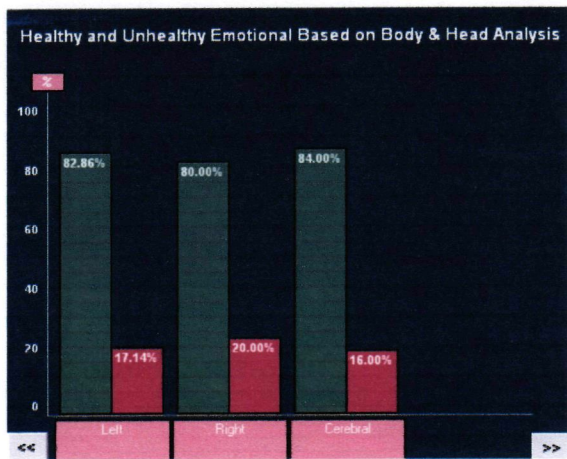


Figure 11: The Results for Sample 1 from Kolej 9 Universiti Malaya

Figure 10 shows the result taken from Sample 1 at Level 14 Menara Telekom. Three measurements have been done, and the graph shows the average for all measurement. Figure 11 shows the result taken from Sample 1 at Kolej 9 Universiti Malaya. Five measurements have been done, and the graph also shows the average for all measurement. As a general, it can be seen that 10 of the graph in each part of bioenergies from Result 1 have a higher unhealthy emotion compared to Result 2. Five graph shows maximum healthy emotional for both results in the same part of bioenergies and 4 graph shows higher unhealthy emotion for Result 2 compared to Result 1.

Due to the result for body and head analysis, Result 1 shows higher unhealthy emotion for both left and cerebral bioenergies compared to Result 2. Due to Chakra analysis, Result 1 still shows higher unhealthy emotion, where three of the chakra; Solar Plexus, Heart and Throat Chakra give high percentage for that unhealthy emotion. However, Result 2 gives high percentage in unhealthy emotion for Crown Chakra. Others are balance. Next, the graph for brainwaves shows five of the graph gives higher unhealthy percentage which is Cerebral Cortex, Cerebellum, Limbic System, Parietal Lobe and Prefrontal Cortex (Left).

## 5.0 DISCUSSION AND CONCLUSION

The most difficult part in determining the effect of transmission line radiation to human psychological and brain due to emotion is the measurement to obtain frequency readings. This is because the emotion of people at certain time is not fixed and always changing, thus the frequency reading showed by the hand-held RFI Digital Frequency Counter also keep changing. Other than that, there is also a problem in determining and describing either a person's emotion is affected or not by transmission line radiation because the emotion is very complex, something that is very subjective – it involves feelings, arise spontaneously and sometimes under control and can be interfered by many other factors such as problems and pressure that the person encounter. For example, the person might experience financial, working, studying or family problems.

However, this technique using Aura interpretation in determining the effect of transmission line radiation on emotion is still effective based from the comparison being made on people that live nearby and far away from the transmission line as shown in the results above. This Aura concept is divided into three parts to be analyzed. First, is bioenergy analysis

that enables us to see whether emotion or human mind being absorbed, contributed and thought by a person is interfered or not. Second, is Chakra or endocrine system analysis. It enables us to see the healthy and unhealthy parts of the subject for each category. Lastly, brain analysis that enables us to see parts that controls our emotion for each category such as memory, communication, nervous system, hormone and others.

For instance, Result 1 tells us that the person experienced frequent emotional disturbance for most bioenergy, Chakras and brain parts. That differs with the second result taken from the people live far from transmission line, where that person only experienced a few emotional disturbances.

Therefore, it can be concluded that the person from the first result might experienced the effect from the transmission line radiation. However, this does not mean that radiation has a direct effect on the emotion, but it could be that the radiation affected the biological body or brain then the pains effectuate the person to be in grief, anger, tired, lost of concentration and many more.

The effect from those emotion disturbance can also cause other negative effects. In general, if a person lives nearby the transmission line, that person probably will encounter family problems; if working, their performance will decrease thus it affect the productivity of that company. Meanwhile, if an educational institution is situated near the transmission line, emotion disturbance can also affect the person's academic achievement.

## 6.0 FUTURE DEVELOPMENT

The next step to find out whether transmission line radiation affects the emotion, we need to use a more effective method. We still can use the frequency measurement, but not in the Aura concept as the interpretation focus more on personality and characteristics of a person. The interpretation need to be changed only to either that person experiences emotion disturbance or not and it need to be stated clearly.

## 7.0 ACKNOWLEDGEMENT

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