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Brain Fingerprint Technology

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Abstract—
Brain Fingerprint is computer based technique which is designed to determine unrevealed information of particular person's brain by mapping electronic brain wave respond to word, phrases, or images obtainable on a PC. Brain Fingerprint are measured by an EEG event-related potential, a P300-MERMER (Memory and Encoding Related Multifaceted Electroencephalographic Response). This initiative is suppose to be the best Dishonesty Rader accessible as on date and is said to expose even stable convict who pass the polygraph test with comfort.

Keywords — **Electroencephalography (EEG), polygraph**

1. INTRODUCTION

An unknown person whose don't know that what is brain fingerprinting. So we can say that brain fingerprinting as a scientific technique to test the brain activity. It is also called lie detector technology. In this technology the machines detects or test an individual's brain or mind conditions.

In the field of scientific medical technology or can called criminology brain fingerprint is a technology in which the investigator detects the reality through the testing of an individual's mind.

Brain fingerprinting first introduced in United States of America and also known as lie detector test. Brain fingerprint testing or technology detect scientifically connectivity or absences or presences directly or indirectly of the specific information.

Brain fingerprinting testing scan the vanes activity and find out that an individual whose mind tested, tell lie or truth.

Figure 1. Testing of a person being done wearing a special headband with the help of electronic sensors.

For Example:- If an individual steal the information or he murders someone but he doesn't accept that he isn't "guilty" then the investigator could the test of his brain and detect that he is telling a lie or not. It means that if the person murderer or connected to that case then he give his answer yes or no.

So, we can say that Brain Fingerprinting technology detect the guilty scientifically.

Similarly, we can say that Brain Fingerprinting technology is a procedure in which we collect the information through the individual's mind.

In more than 120 test Farwell's brain fingerprinting proved to be 100% correct. US Navy tests, US intelligence agency test, FBI agents tests are included in 120 tests.

In particular person's research Willina Iocono and other's who follow individual or identical scientific procedures to Farwell's brain fingerprinting re-counted similar high level of veracity.

This technology can be applicable on that situations in which the investigator having the sufficient amount of data and this information connected direct or indirect with the crime scenario.

So, brain fingerprinting is important to the respect of the reality of crime scenario. With the help of polygraph procedures, investigator access the validity of suspect's "guilty" knowledge i.e. palm sweating and heartbeats rate.

Brain fingerprinting is a scientific technique, objective method to identify unseen information saved in a particular person's brain by accessing EEG brain return. This response is characterized by a unique brain wave graph known as a P300-MERMER.

2. PHASES

In brain fingerprinting technique there are four phases of the detect testing as follows:-

Phase I :- Investigation
In this phase the investigator investigates the evidence related to the crime scene or that data whose get the crime scenario. The science of the brain fingerprinting technology accurately determine the facts and collect the information through that data which get in investigation.

Phase II :- Recognition or Interview the Object
In this phase the investigator recognizes the evidence and get interview of the suspect.

Phase III :-Analysis the Data
In this phase the investigator analyses or determines both data by mathematical data analysis algorithms and get the result that what is true information and what is wrong information.

Phase IV :-Result
In the last phase of the brain fingerprinting test is result of guilty or innocence. This result declares the person is guilty or innocent. On the basis of result the jury's or judge give the judgement about the reports.

We know that brain fingerprinting is a testing technology according to illegal act. There may or may not be different types of conformation but the brain is always active in constructing the ideas, executing the ideas and recounting the crime situations. But the testing of an individual person's brain fingerprinting or scanning system is under the computer control.
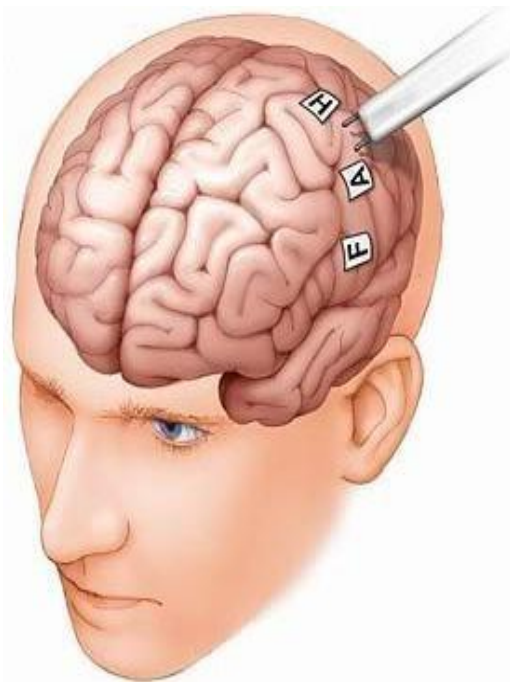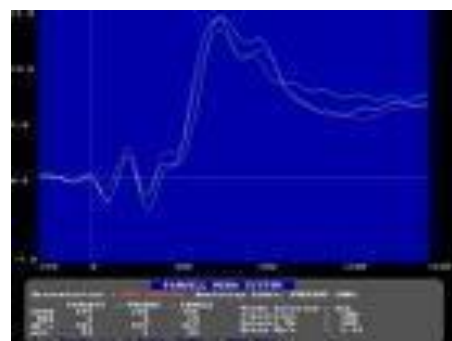
Figure 3. Victim's stimulus.

Figure 4. Waves of Guilty

3. HOW IS BRAIN FINGERPRINTING WORKS

That's because brain fingerprinting is a testing technique. So, for testing the tester uses some symbols for identifying the brain's signals.
When the investigator test the individual's brain then the technology uses the brain waves for testing the memory.

There are three kind of information represented by three colours:-

Red :- If red line is on top of the graph then the suspect is telling a lie.

Blue :- If the blue line is top on the graph then the suspect is connected to the crime.

Green :- If the green line top on the graph and overlapped on the blue line then the suspect is innocent and he isn't connected to the crime.
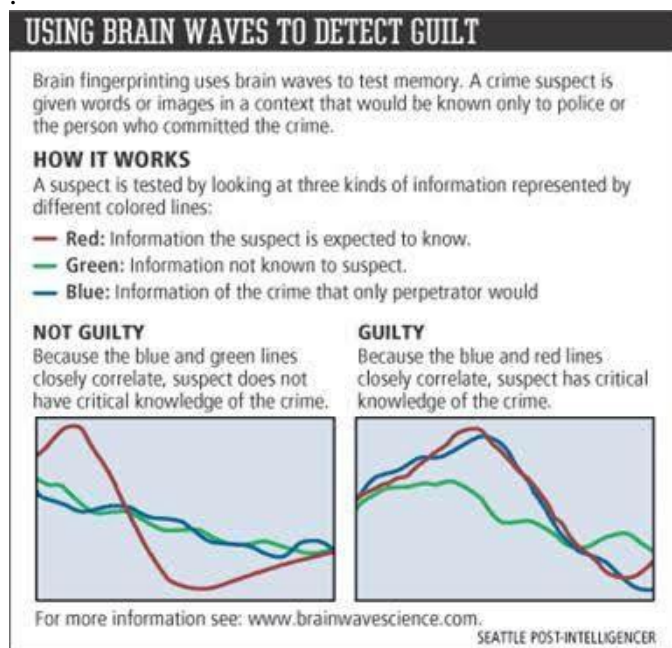.

Figure 5: Use of brain wave to detect guilt

4. ROLE OF LEGAL POCEEDING

The act of brain fingerprinting in legal proceeding

We know that brain fingerprinting is a testing technique of brain to catch scientifically. It is also use to legally investigate the bases of some critical cases like murder and most complicated case in the whole world counter terrorism. The brain fingerprinting is to take the outcome of inquiries regarding what data is interchangeable or not. In this proceeding If someone is not connected to the cases directly or indirectly and not having the information of that particular situation then it will not trap or guilt.

This is too helpful for find out the guilt through the brain testing. This report is used to against the guilty and thus to provide the unrestricted evidence to aid in their determination of guilt or innocence of a suspected.

Similarly, Brain fingerprinting does not tell us that information of the candidate is true or not. It is also used for the interviews regarding the presence or absence of information in a specific brain.

Brain fingerprinting tells that this information added by the investigators according to his skills or understanding. This technique only tells that particular information which submitted by the investigator is stored in an individual person's brain or not on which perform the testing technique. It is the basis of our legal system the judge gives the cause on the basis of available evidence to submitted by the investigator.

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5. USES AND APPLICATIONS

1. National security
2. Medical diagnosis
3. Advertising
4. Criminal justice system
5. Experimental decision
6. Critical analysis
7. Error rate/accuracy standards

6. LIMITATIONS

1. Brain fingerprint technique does not detect emotions like who is in love, in anger and so on.
2. It is also failed to detect the stress, intentions, action.
3. The Brain fingerprinting does not detect the lies it means it can detect that an individual is telling a lie or true but it cannot detect that what is real thinks.
4. This technique is a time consuming technique because for testing should be already having the legal permission for patients who need constant monitoring.

7. CONCLUSION

Brain fingerprinting technique is known as a lie detector technique. It is a revolutionary technique. It is a scientific technique to clarify misdeed, to determine culprit, to acquit an innocent questionable, with a perfect record in efficiency analysis with US governmental organization, genuine lawbreaker expositions, and other operations. It is a technique which accomplish an intense requirement for government, law imposition organizations, companies, analyst, wrongdoing

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