

# ELECTRONIC BRAIN FINGERPRINTING TECHNOLOGY

**Pooja Gupta<sup>1</sup>, Shivani Shakya<sup>2</sup>, Sangeeta Sharma<sup>3</sup>**

<sup>1,2,3</sup> UG, Department Of Electronics And Communication Engineering,

Raj Kumar Goel Institute of Technology for Women. Ghaziabad (India)

## ABSTRACT

Brain finger printing detects masked in order store in the brain by measuring brain wave Responses. 76 test detected company or nonexistence of information regarding (1) real-life events counting sin crimes. (2) Real crimes with sizeable significance. (3) Knowledge single to explosives (E00/AED) experts. We contrast P300 and P300 MERMER even linked brain potentials for error rate/ exactness and statistical secure in four field/real – life studies. Brain finger printing methods and scientific principles for laboratory and field applications discussed. Brain Finger printing technology stands balanced to exert a marvellous collision on the arrangement and result of certain legal cases in the near future.

## I INTRODUCTION

Dr. Lawrence Farewell, has used this technique in 1992 .farewell, PhD has been commercializing a crime-solving technology closely linked to detecting falsification that he calls "Farewell brain finger printing". Brain finger printing is an exploratory way which course recognition of familiar stimuli by measuring electrical brain wave responses to words, phrases, or pictures that is obtainable on a computer screen. Brain fingerprinting is a notorious technique that is activist as a way to categorize a radical or other risky person by measuring the "brain print" of that person when shown a particular body of writing or an image that was previously familiar. The technique can be applied only in situations where investigators have a sufficient amount of specific information about an event or activity that would be known only to the executor and investigator. The brain print is based on the P300 difficult, a series of well-known brainwave mechanism that can be calculated. The method is said to be extra victorious than a lie down detector test. Brain fingerprinting is principally different from the polygraph (lie-detector) which method feeling-based physiological signal such as blood pressure, sweating, and heart. Brain fingerprinting is parallel to DNA, fingerprints, and other forensic sciences in this view. Dr. Lawrence Farwell, has used the way in at least one court case to establish the innocence of a man. Farwell showed each person pictures of the crime scene and calculated their brainwave responses to terminate which person had seen the offence view before. Claiming that the test is 99.99% just right, Farewell's test influenced the court to free the convicted person.

## II WORKING PRINCIPLE

The entire Finger printing system is under computer control, together with presentation of the stimuli, video recording of electrical brain movement. A numerical information testing algorithm that compares the responses to the three types of stimuli and produces a determination of “information present” or “information absent” and a statistical confidence level for this determination. When someone commits a crime, his brain records it has a reminiscence. Brain fingerprinting seeks to disclose that recall, by showing the exact substantiation taken from the felony scene. A head band with sensor is placed on the subject. A series of pictures words is flash on the screen. The computer files the brain waves formed in response to what the brain waves formed in result called a P300 MERMER are recorded as a wave form. By analyzing MERMER the model of waves, farewell can determine if the subject is recognize what he is seeing.



**Fig No: 1 – Medical Treatment**

## III SCIENTIFIC PROCEDURE

A sequence of words or pictures is presented on a video watch under computer control. Each stimulus appears for a function of a second. Three types of stimuli are presented.

- 1) Targets
- 2) Irrelevant
- 3) Probes.

### 3.1 Targets

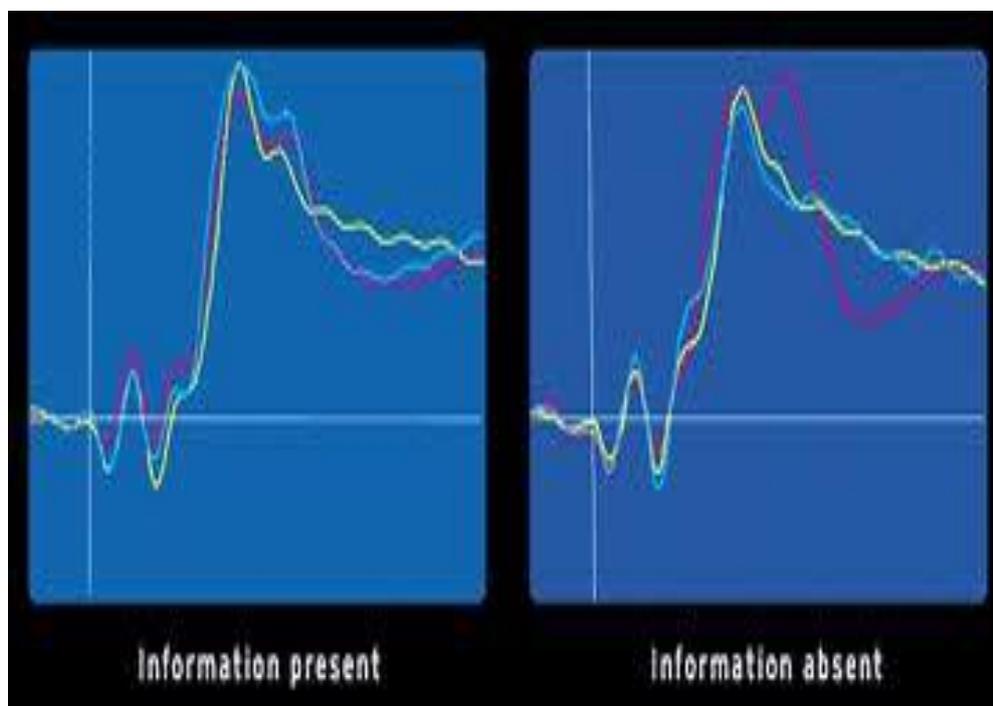
The goals stimuli consist of data known to expect about the crime which will found a base line answer and bring out a MERMER.

### 3.2 Irrelevants

The irrelevant to do with the crime, which will found a baseline brain answer for information that is not noteworthy to suspect in context of the crime. These IRRELEVANTS do not convey out a MERMER. Some of the non-goals stimuli to the position under enquiry

### 3.3 Probes

When the information veteran is felony valid and known only to the suspect and investigators. Then “information present” implies guilt and “information absent” imply incorruptibility



**Fig No: 2- Wave from Information**

## IV EQUIPMENTS AND TECHNOLOGY

The Brain fingerprinting organization comprise

- An individual computer (Pentium IV, 1 GHZ, IBM PC).
- A data accomplishment board
- Two monitor
- An EEG amplifier
- Software for information acquirement
- Some electrodes.

### 4.1 Computer Controlled

- The Electrodes used to compute electrical brain activity.
- The software in attendance the stimulus, collects the EEG data, and analyzes the data.
- Brain electrical bustle augmented and stored on a memory device.
- During the statistics collected works the stimulus is display to the topic on one monitor and the investigator views another monitor.

- Researcher gets the summary of the documentary information and form as follows.

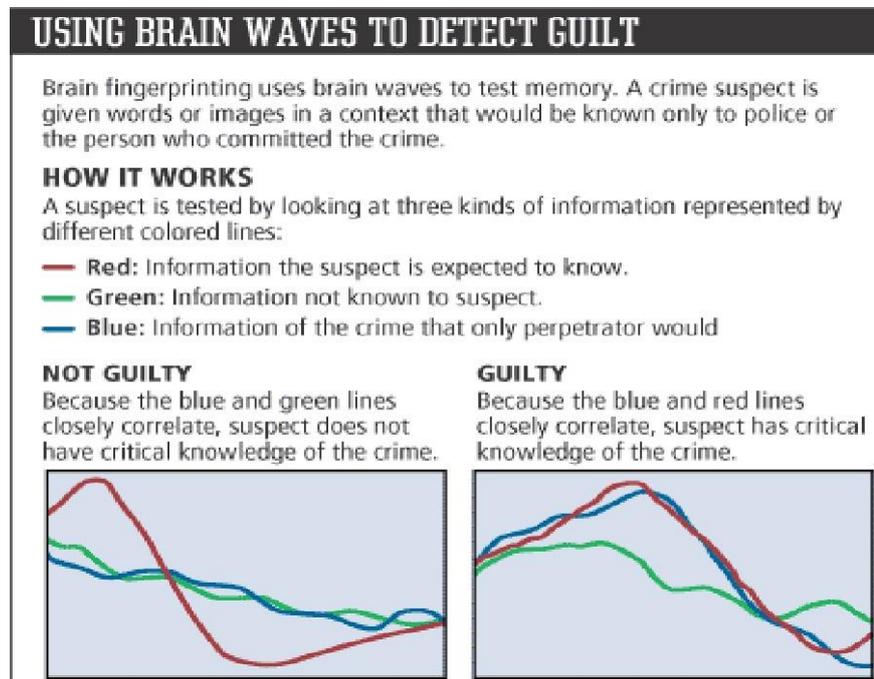


Fig No 3: Using Brain Waves To Detect Guilt Using Brain Fingerprinting Technique

## V BENIFITS

- Identify criminal speedily and scientifically.
- Records of 100% accuracy;
- Confirm incorruptibility, clear the falsely accused ,and the falsely convict;
- Provide immediate systematically outcome, Information Present or else data not present i.e., the felony relevant information is or is not store in the Brain of suppose, within a little hours (similar day).
- Reduce expenditure and complexities. Provide a directly familiar scientific method of distinctive between perpetrators and blameless suspects.
- Access criminal corroboration in brain. substantiation of a crime is approximately always lay up in the brain of the perpetrator; fingerprinting and DNA, through accurate and very useful can only be together in just about 1% of all illicit cases.

## VI APPLICATIONS

- Counter Terrorism
- Criminal justices
- Medical
- Sensitive military
- Foreign intelligence Screening.

## VII CONCLUSION

Brain fingerprinting is an innovative new technology for solve crime, with a record of 100% correctness, equipment fulfil a vital need for administrations, law enforcement agencies, corporations, and people in a tons-dollar entire market. The technology is suitable developed and accessible for application in the field.

## REFERENCES

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