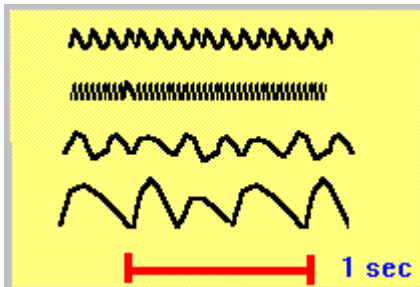


Brain Fingerprinting

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Brain Fingerprinting is a computer based technology invented by Dr. Lawrence A. Farwell, a neuroscientist from the USA, to measure the brain wave responses of the suspect "to crime relevant words or pictures " that would possibly link the suspect with the crime. The technique is based upon a basic premise that human brain retains all-important information for years and decades and whenever a reference is made to a particular event by means of words or pictures the brain recalls the event. The measurement of such responses by means of a suitable equipment known as EEG (Electro Encephalo Gram) which records the event related responses technically known as Event Related Potential (ERP) which is specific to a particular event for a particular person (hence known as fingerprinting) is known as Brain Fingerprinting.

Fingerprinting technique works as follows. Words or pictures relevant to a crime are flashed on a computer screen, along with other, irrelevant words or pictures. Electrical brain responses are measured non-invasively through a patented headband equipped with sensors. Dr. Farwell has discovered that a specific brain-wave response called a MERMER (memory and encoding related multifaceted electroencephalographic response) is elicited when the brain processes noteworthy information it recognizes. Thus, when details of the crime that only the perpetrator would know are presented, a MERMER is emitted by the brain of a perpetrator (which is measured in terms p300, meaning 300 milliseconds emission levels). In Brain Fingerprinting, a computer analyses the brain response to detect the MERMER, and thus determines scientifically whether or not the specific crime relevant information is stored in the brain of the suspect.



Brainwave Pattern



Headband

II. Four Phases of Brain Fingerprinting

1. Brain fingerprint Crime Scene Evidence Collection.
2. Brain Fingerprinting Brain evidence collection
3. Brain Fingerprinting Computer Evidence Analysis
4. Brain Fingerprinting Scientific Results

In the Crime Scene Evidence Collection the BFP Expert examines the Crime Scene Evidence connected in the Crime to identify the details of the Crime that would be known only to the perpetrator

The expert then conducts the Brain Evidence Collection in order to determine whether or not the Evidence from the Crime Scene Matches Evidence Stored in the Brain of the Suspect

In the Computer Evidence Analysis the Fingerprinting system makes a mathematical determination as to whether or not this Specific Evidence is stored in the brain and computes a statistical result there upon a scientific result of either information present - the details of the crime are stored in the brain of the suspect or information absent – the details of the crime are not stored in the brain of the suspect.

III. Advantages of Brain Finger Printing.

- a. Identify the Crime Perpetrator quickly and scientifically
- b. Record of 100 % Accuracy
- c. Reduced expenditure of Money and Man Hours of Law enforcement
- d. Provide smooth handling of suspects to the Law Enforcement Agency
- e. Human rights friendly
- f. Likely to be an admissible evidence in Court of Law, because the evidence is scientific, objective, accurate and non-invasive in nature.

IV. Role of the I.O in Brain finger printing examination

- a. Photograph the minute details of the Crime Scene
- b. Photograph the Weapon (if available) – **Very Important**
- c. Do not delay the decision of subjecting the suspect / accused/ witness to Brain finger Printing.
- d. Obtain the consent of the accused/ suspect in writing before the court of law.
- e. Avoid sleep-inducing medication.