International Journal of Engineering Applied Sciences and Technology, 2016
Vol. 1, Issue 12, ISSN No. 2455-2143, Pages 97-98
Published Online October-November 2016 in IJEAST (http://www.ijeast.com)

STUDY ON BRAIN FINGERPRINTING

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***Abstract*— This paper is about "Brain Fingerprinting". The technique of Brain Fingerprinting was introduced in the year 2001. This technique has an error rate of less than 1%, but still wasn't used for a long time. Even now, there is still a debate going on whether to use Brain Fingerprinting in the criminal justice system or not. Even though having less than 1% error rate this technique is not very popular because of its limitations and its inability to prove anyone guilty, making its counterpart the lie detectors more popular among people. This paper also talks about some real life cases where Brain Fingerprinting was put to use and was very successful in finding out who the guilty was.**

Keywords— **Error rate, Justice System, Technique**

I. INTRODUCTION

Brain Fingerprinting is an investigative system that measures distinguishment of recognizable boosts by measuring electrical cerebrum wave reactions to words, expressions, or pictures that are exhibited on a workstation screen. To date, Brain Fingerprinting testing has not brought about any mistaken determinations – there have been no false positives or false negatives. It has given exceedingly exact brings about in excess of 200 tests, including tests on FBI operators and tests supported by the CIA and the US Naval force.

The main difference between a criminal and a purely individual authors, he made the crime, announced the subtle elements of the crime into his brains, and the innocent suspect does not. Even a terrorist loan including terrorism-related information stored in his brains. That's the thing, the test fingerprint mind begins logical.

Words or pictures are introduced to a major terrorist attack guilt, terrorist preparation or specific information or a chance at a computer workplace, in consultation with other words or unwanted images. reactions of brain waves are measured to suspect not insist equipped with EEG sensors headband license this drug. Restrictive work then analyzed the data, where to store it in my head misconduct relevant data. A specific and measurable brain response known P300 issued by the mind of a killer who the subtle elements of evil that goes from the head, but not for the innocent has to offer in this folder on your main suspects. The P300 reaction has been widely studied and generally in the direction of master planners for over 30 years and is divided recognition extensive collection in the experimental field of psychophysiology.

The rest of the paper is organized as follows. Brain Fingerprinting vs Lie Detectors are explained in section II. Applications are presented in section III. Its procedure is explained in section IV. Its Limitations have been explained in section V. Concluding remarks are given in section VI.

II. BRAIN FINGERPRINTING VS LIE DETECTORS

In this way, how solid is this engineering? Much more, is this solid strategy that could be utilized as a part of criminal equity framework whatsoever?

Despite the fact that Brain Fingerprinting is attempting to evaluate whether somebody is lying or not, the center of this framework is memory. All it is doing is telling others if the memory is in the subject's mind or not. Anyhow how solid is memory? Numerous individuals believe that mind is similar to a feature cassette deck and when memory is reviewed, it is similar to playing a feature tape. However the truth of the matter is memories are always reproduced and recreated each time they are recovered. All things considered, would we be able to truly trust reproduced memory to focus any reviewed memory to be truth and nonattendance of the memory as evidence of not conferring such movement in any case? More inquiries climb on account of criminal acts. Sara Solovitch asks in her article, "how does an elevated state of arousal influence the memory process?" If a wrongdoing was carried out in a fury, can the culprit recall points of interest of the wrongdoing scene that the agents think would be recalled just by the culprit? What about if the culprit was high on medications or liquor at the time of the wrongdoing?

Should we truly depend on memory to discover lies in individuals? Cerebrum is a great deal more muddled than we have the learning of. I am not certain whether we ought to tie memory with lying, in which case Brain Fingerprinting is not superior to Lie indicators. I concede current Lie Detectors have a few issues with unwavering quality and don't have precision aftereffect of 100% like Farwell did with Brain Fingerprinting. Yet I rather have lie indicator enhanced with more engineering than depending on Brain Fingerprinting. Memory is simply not steady enough to be utilized as a part of criminal equity framework. In any case for the time being, this is the place I stand and I think the criminal equity framework is with me on this.

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III. PROPOSED METHODOLOGY

Brain fingerprinting using brain waves to test memory. A suspected crimes words or images in a context that the police or the person would be.

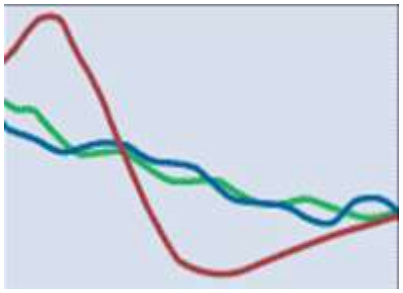
HOW IT WORKS:
A suspect is tested three types of information represented by different colored lines:

—— RED: information the suspect is expected to know.

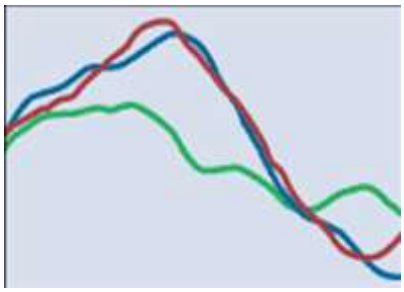
—— BLUE: no reason to suspect information.

—— GREEN: Information from the crime that would only culprit.

NOT GUILTY
Because the blue and green lines closely correlate, suspect does not have critical knowledge of the crime.



GUILTY
Because the blue and red lines closely correlate, suspect has critical knowledge of the crime.



IV. BRAIN FINGERPRINTING IN OTHER FIELDS

The various applications that could be are as follows:
1) Try different forms of employment, particularly in the treatment of evidence and sensitive foreign military intelligence.
2) To identify symptoms of Alzheimer's sickness, Mental Depression and different types of dementia including neurological issue.
3) Terrorism: to contribute to the following key elements in the fight against terrorism, Brain Fingerprints:

i) Participated in determining who to terrorist acts, to assist directly or indirectly.
ii) Assistance in identifying potential future terrorist acts to terrorists trained to kill, even if they are not active in a "sleeper" cell and not for years.
iii) Persons who have knowledge or training in banking, finance and communication that are associated with the equipment and identifying terrorist acts. Help to figure out whether an individual is in an authority part inside a terrorist association. Mind fingerprinting engineering is focused around the guideline that the cerebrum is key to all human demonstrations. In a terrorist demonstration, there might possibly be fringe confirmation, for example, fingerprinting or DNA, yet the cerebrum of the culprit is dependably there, arranging, executing and recording the wrongdoing.

V. CONCLUSION

Brain Fingerprinting is a revolutionary new scientific technology for solving crimes, identifying perpetrators, and exonerating innocent suspects with a record of 100% accuracy in research with US government agencies, actual criminal cases, and other applications. The technology fulfills an urgent need for governments, law enforcement agencies, corporations, investigators, crime victims, and falsely accused innocent suspects. Lie Detectors still cause a problem for Brain Fingerprinting but the error rate of the Lie Detectors is quite high. Thus, with the combined use of Lie Detectors and Brain Fingerprinting we can achieve unmatchable results.

VI. REFERENCE

[1] http://www.larryfarwell.com/brain-fingerprinting-executive-summary-dr-larry-farwell-dr-lawrence-farwell.html
[2] http://serendip.brynmawr.edu/exchange/node/6932
[3] http://www.neurotechreports.com/pages/brainfingerprinting.html
[4] http://www.pbs.org/wnet/innovation/about_episode8.html
[5] http://news.nationalgeographic.com/news/2001/07/0705_wirelies_2.html