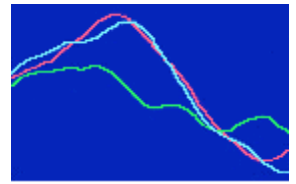


Brain Fingerprinting Laboratories

a new paradigm....



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Research and Summary Information

PUBLICATIONS

Brain Fingerprinting Testing Detects Information

Brain Fingerprinting testing detects information stored in the human brain. A specific, electrical brain wave response, known as a P300, is emitted by the brain within a fraction of a second when an individual recognizes and processes an incoming stimulus that is significant or noteworthy. When an irrelevant stimulus is seen, it is seen as being insignificant and not noteworthy and a P300 is not emitted. The P300 electrical brain wave response is widely known and accepted in the scientific community. There have been hundreds of studies conducted and articles published on it over the past thirty years. In his research on the P300 response, Dr. Farwell discovered that the P300 was one aspect of a larger brain-wave response that he named a MERMER® (memory and encoding related multifaceted electroencephalographic response). The MERMER comprises a P300 response, occurring 300 to 800 ms after the stimulus, and additional patterns occurring more than 800 ms after the stimulus, providing even more accurate results.

Scientific Procedure

Brain Fingerprinting testing incorporates the following procedure. A sequence of words, pictures or sounds is presented under computer control for a fraction of a second each. Three types of stimuli are presented: "targets," "irrelevants," and "probes." The targets consist of information known to the suspect, which will establish a baseline brain response (MERMER) for information known to be significant to this subject in context. The subject is given a list of the target stimuli and instructed to press a particular button in response to targets and another button in response to all other stimuli. Most of the non-target stimuli are irrelevant, having no relation to the situation being tested. These irrelevants do not elicit a MERMER, and therefore establish a baseline brain response for information that is not significant to this suspect in this context. Some of the non-target stimuli are relevant to the situation being tested. These relevant stimuli are referred to as probes; information relevant to the test. For a subject with specific knowledge of material being tested, the probes are noteworthy due to that knowledge, and therefore the probes elicit a MERMER, indicating "information present" — information stored in the brain. For a subject lacking this knowledge, probes are indistinguishable from the irrelevants, and thus probes do not elicit a MERMER, indicating "information absent" — information not stored in the brain.

Computer Controlled

The entire Brain Fingerprinting system is under computer control, including presentation of the stimuli, recording of electrical brain activity, a mathematical data analysis 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. At no time during the analysis do biases and interpretations by the person giving the test affect the presentation or the results of the stimulus presentation.

Scientific Experiments, Field Tests, and Criminal Cases

When the information tested is crime-relevant and known only to the perpetrator and investigators, then "information present" implies participation in the crime and "information absent" implies non-participation. Similarly, when the information tested is information known only to members of a particular organization or group (e.g., an intelligence agency or a terrorist group), then "information present" indicates an informed affiliation with the group in question.

Scientific studies, field tests and actual criminal cases involving over 175 individuals described in various scientific publications and technical reports by Dr. Lawrence A. Farwell have verified the extremely high level of accuracy, utility, cost-effectiveness, and overall credibility of the Brain Fingerprinting system. The system has been extremely accurate in all studies, field tests, and actual cases conducted at the Federal Bureau of Investigation, a US intelligence agency, the police departments and with other organizations and individuals.

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