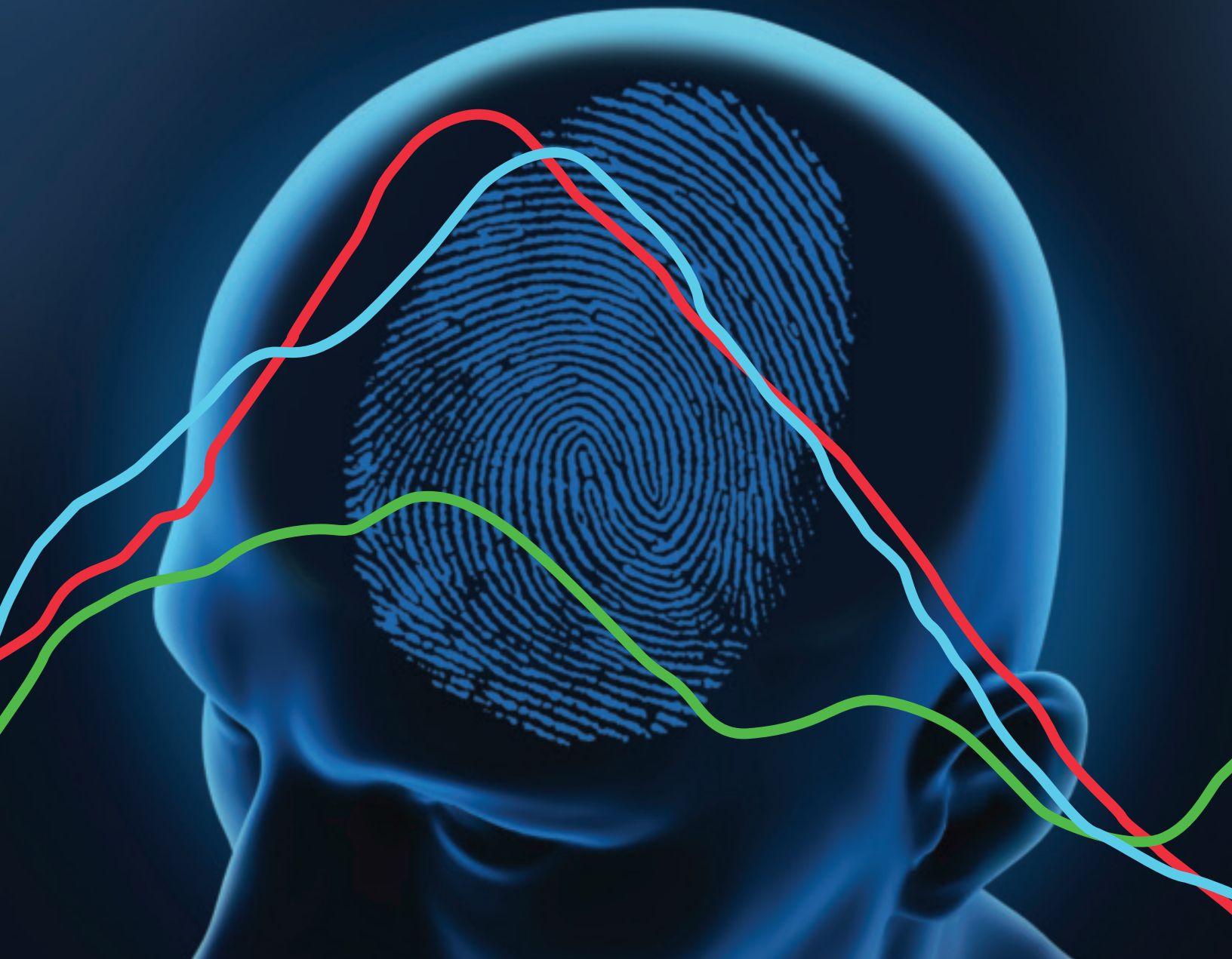




# iCognitive

A game-changing science  
that detects concealed information  
stored in the brain



## A proven science that quickly detects concealed information by measuring brain waves

Forensic science is constantly evolving — from the discovery of unique human finger prints to the development of DNA profiling, with its ability to match a suspect to a crime.

There's only one problem. Fingerprints and DNA evidence are uncovered in only 1 - 2% of all cases. And DNA fingerprinting can only be successfully applied when investigators collect and preserve fingerprints and biological samples in a time- consuming and expensive labor- intensive way.

**iCognitive by Brainwave Science takes forensic science to the next level... by pinpointing and charting the very origin of deception, stored within the brain.**

## LAW ENFORCEMENT AND CRIMINAL JUSTICE

**This new forensic advancement that can permanently transform the way suspects are convicted or freed.**

Consider this: what if law enforcers could tap into a suspect's mind and "read" the invisible clues that link him or her to a crime? Science fiction? Hardly! It's called iCognitive and through it, investigators can identify or exonerate suspects based upon measuring brain-wave responses to crime-related images, words or phrases (stimuli) displayed on a computer screen.

This astounding new technology – **tested by several U.S. federal government agencies and found to be over 99 % ACCURATE** – is the latest in technological crime solving, providing an accurate and reliable process to conduct criminal investigations without invasive procedures and biases.

### **Fast and cost-effective way to determine the truth**

The principle is simple. It has long been established that memory centers of the human brain respond to the sight of familiar stimuli with a distinct change in electrical activity. *The brain waves cannot lie.*

As a result, iCognitive is fundamentally different from polygraphs; it depends only on brain information processing, not the emotional response of the subject.

### **Identifies the guilty...exonerates the innocent.**

Just as science matches fingerprints from the crime scene with a suspect's own fingerprints, and DNA matches biological samples from the crime with the suspect's own DNA, iCognitive matches information from the crime scene with information stored in the subject's brain repository.

Even though there is no way to completely stop crime, iCognitive can help ensure that more crimes are solved by revealing whether a suspect possesses relevant information. The knowledge that such an ingenious, accurate and scientific technique exists may very well serve as a powerful crime deterrent.



iCognitive technology offers a wide range of law enforcement, criminal justice, counterterrorism and national security applications. Here is a sample of just a few...

- 
- Violent crimes
  - Property crimes
  - Simple assault
  - Embezzlement
  - Forgery
  - Counterfeiting
  - Drug offenses
  - Prostitution
  - Sex offenses
  - Cyber crime
  - Organized crime
  - Espionage / Counterespionage
  - Human trafficking
  - Hijacking
  - Kidnapping
  - Rape
  - Employee theft
  - Insurance fraud
  - Financial fraud
  - Immigration and border security

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# COUNTERTERRORISM AND NATIONAL SECURITY

## **iCognitive harkens in a whole new era in security and intelligence gathering**

It used to be easy to distinguish whom we were fighting by what they wore and where they were in the battlefield. Now, the battlefield can be anywhere – even cyberspace – and the terrorists blend in far too readily.

In today's times, terrorists and their accomplices are very likely in full sight among us. So how to identify them? iCognitive embraces one commonsense premise: even if there is no external evidence left behind, the brain is an infallible witness to the plotting of a crime. Put another way, the terrorist's brain contains knowledge of organizations, training and plans that do not exist in an innocent person's memory bank.

## **iCognitive provides investigators with a revolutionary state-of-the-art weapon to fight terrorism.**

Measuring the brain's response to stimuli has been demonstrated to be over 99 % accurate in detecting EOD/IED bomb knowledge, uncovering high intelligence value individuals, and establishing links between a suspect and known terrorist networks, places and events. iCognitive is invaluable when used to:

- Determine level of involvement in terrorist activity, whether directly or indirectly.
- Support investigators in identifying potential threats, even if in a "sleeper" cell and inactive in years.
- Help verify hierarchal and leadership structure within terrorist organizations.
- Swiftly detect potential threats within asylum applicants and refugee camps.
- Validate the possible links from database analysis techniques and methodologies.



iCognitive may well be the  
breakthrough that Anti-Terrorism Investigators  
have hoped for, enabling them to validate  
potential threats and terrorist activity with a  
nearly infallible degree of accuracy.

# iCOGNATIVE TECHNOLOGY: HOW IT WORKS

**A game-changing scientific tool that quickly unveils concealed information by measuring brain waves.**

The iCognitive System is portable and easy to use in just about any working environment. Software modules are incorporated into the computer and the test is run by a trained facilitator.

A suspect wears a headset equipped with EEG sensors to measure the electrical responses to stimuli flashed on a display screen within a fraction of a second.

The brain responses are then tested through viewing three different kinds of information. The brain responses are represented here by different colored lines.

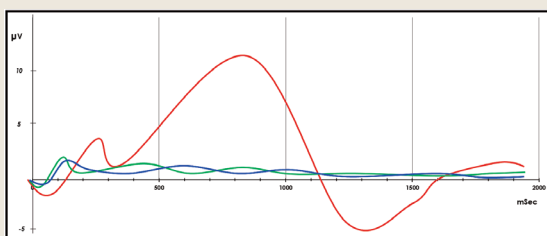
- Red: Information that the suspect knows, whether or not he committed the crime.
- Green: Information not known to the suspect.
- Blue: Crime-relevant information only the perpetrator would know

If the suspect recognizes the stimuli displayed on the screen a response will occur. The digital signal processor digitalizes these signals and feeds that brainwave data into the application for further analysis.

The data is then analyzed with a proprietary algorithm that computes the result. The Results showing statistical confidence in percentage are displayed at the end of analysis in two categories: "Information Present" or "Information Absent."

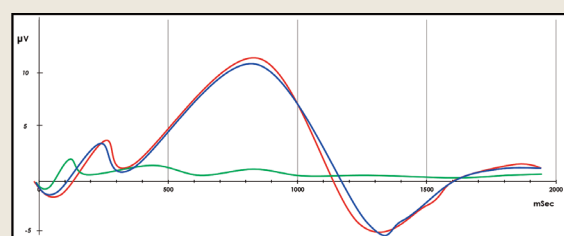
The following graph displays two case scenarios representing "Information Present" and "Information Absent" results, that are revealed at the end of analysis.

## INFORMATION ABSENT



The blue and green lines closely correlate, confirming that the suspect does not have knowledge of the crime.

## INFORMATION PRESENT



In this case, the blue and red lines closely correlate. Computer analysis verified that the suspect had critical knowledge of the crime.

- Red: Information that the suspect knows, whether or not he committed the crime.
- Green: Information not known to the suspect.
- Blue: Crime-relevant information only the perpetrator would know



## BENEFITS

### ACCURATE

iCognitive detects with over 99% accuracy to determine whether specific information is known to a suspect in question.

### RELIABLE

P300 Technique is widely accepted in the neuroscience domain, marketing and emerging virtual reality systems.

### FULLY AUTOMATED

The iCognitive process is fully automated. Minimal equipment ensures ease of use while the proprietary software calibrates and analyses results instantaneously.

### TRANSFORMATIVE IMPACT

The technology amplifies intelligence collection disciplines; while physical evidence, like DNA, is only applicable in 1-2% of cases. iCognitive is applicable in 85% -90% of criminal and civil cases.

### INTELLIGENT DETECTION

The P300 electrical response in the brain is analyzed to determine semantic memory recognition; our proprietary algorithms intelligently detect specific information from the brain.

### INTELLIGENCE COLLECTION DISCIPLINE

Best performing security agencies rely on intelligence, quality data and speedy processing to help solve complex crimes. iCognitive is the only advanced corroborative tool to meet these standards. Built in features can also detect subjective testing and inaccurate subject response to stimuli.

### NON-INVASIVE

iCognitive is non-intrusive and does not violate any human rights. The EEG sensors simply collect the reaction to stimuli by measuring brainwaves.

## iCOGNATIVE: THE RIGHT CHOICE

A powerful forensic solution that can permanently change the way suspects are convicted or freed.

## Other Applications

### Counter intelligence

iCognitive protects the interests of a nation through the power of brainwaves.

Reliable and accurate technology to carry out specific screening test for sensitive data or information denied by operatives or suspects.

### Immigration and Border Control

Harness information stored in the brain to protect borders from unlawful infiltration.

Quickly identifies potential gang related or terrorist threats at borders or refugees among applicants seeking asylum. Possibly preventing unlawful entry and terror infiltration into otherwise peaceful communities.

### Human and Drug Trafficking

Trafficking criminals cannot hide when their brainwaves are willing to confess.

iCognitive can also corroborate evidence of human and drug trafficking even in the most complex rings.

## Other solution features include

### Highly portable

- System can be used anytime, anyplace as long there is no direct microwave or electromagnetic interference

### Ease to use

- iCognitive technology modern design is user-friendly built with end user operations interface from conception.

### Customizable

- The robust software meets global standards of language and function customization; different functional configurations can offer exclusive access to authorized personnel.

### Chain of custody capable

- For security purposes, all case facts data are logged and can be reviewed. This information cannot be deleted or edited once a test is carried out.



# iCognitive

by Brainwave Science

## The virtually infallible technology that can bring invisible clues to light

Brainwave Science – a thought leader at the forefront of emerging and sophisticated technology – is pleased to offer iCognitive as part of its suite of products.

This scientific solution measures and reads the brain's involuntary electrical activity in response to a subject being shown stimuli relating to a crime. Our technology has been tested by world-renowned institutions and security agencies. We encourage your interest and inquiries.



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