

IF YOU CAN WIRELESSLY CONTROL INSECTS, CAN YOU WIRELESSLY CONTROL A HUMAN?

white paper  human free will

KICKSTARTER

The RoboRoach: Control a living insect from your smartphone!



Control the movements of a live cockroach from your own mobile device! This is the world's first commercially available cyborg!

Created by
Backyard Brains

183 backers pledged \$12,339 to help bring this project to life.

Last updated December 18, 2013



The RoboRoach Bundle

\$159.99

Please Note: Requires at least one
Cockroach

1 - 10 \$159.99

11+ \$149.99

1 Qty

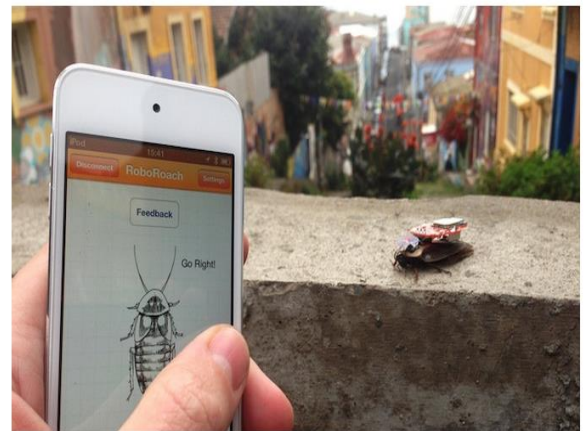
Buy Now

Are you a teacher or parent that wants to teach a student about advanced neurotechnologies? You are in luck! We are excited to announce the world's first commercially available cyborg! With our RoboRoach you can briefly wirelessly control the left/right movement of a cockroach by microstimulation of the antenna nerves. The RoboRoach is a great way to engage with neural microstimulation, learning, and electronics!

The RoboRoach Bundle comes with a complete surgery kit that gives you everything you need to add the RoboRoach backpack to your cockroach.

Documents

- GitHub Respository
- PCB Schematics
- Android App
- iOS App



<https://www.kickstarter.com/projects/backyardbrains/the-roboroach-control-a-living-insect-from-your-sm>
<https://backyardbrains.com/products/roboroach>
<https://backyardbrains.com/experiments/roboRoachSurgery>

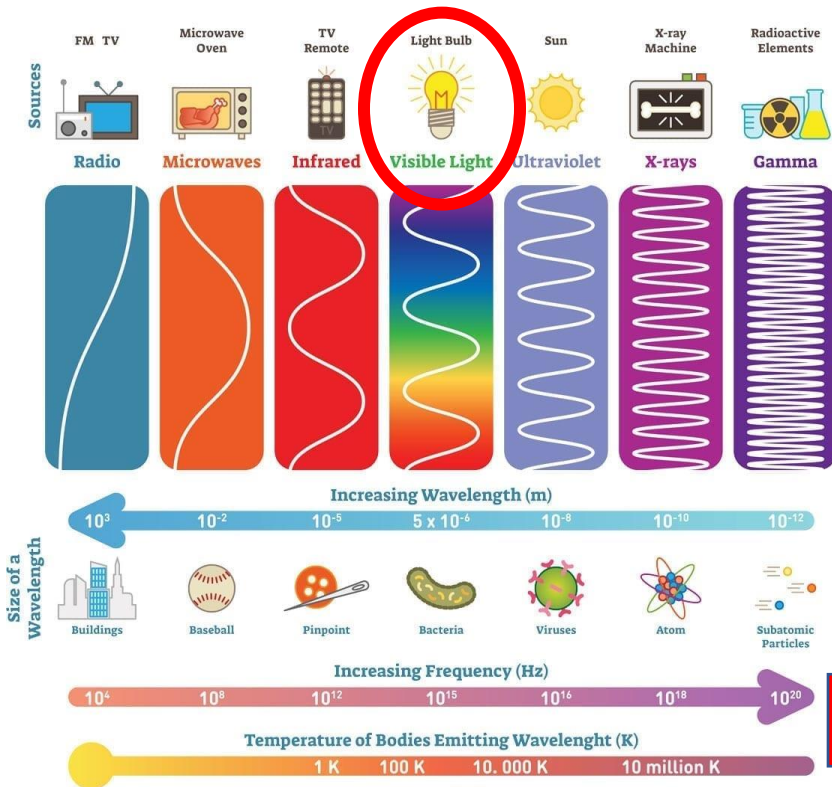
WIRELESS COMMUNICATION

Types of Wireless Communication

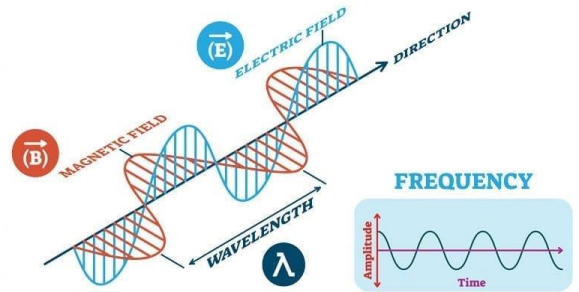


WIRELESS COMMUNICATION IS ENERGY OVER THE AIR
MOST ENERGY YOU CANNOT VISIBLY SEE

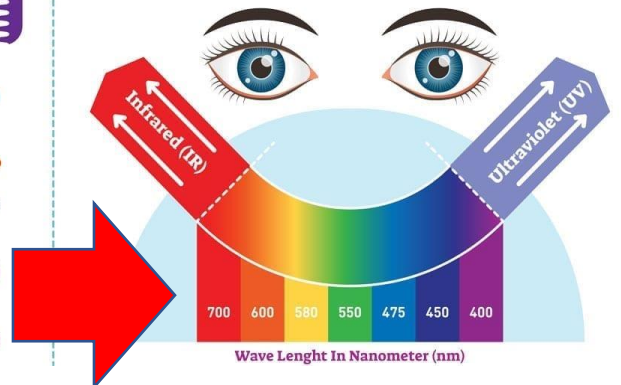
ELECTROMAGNETIC SPECTRUM



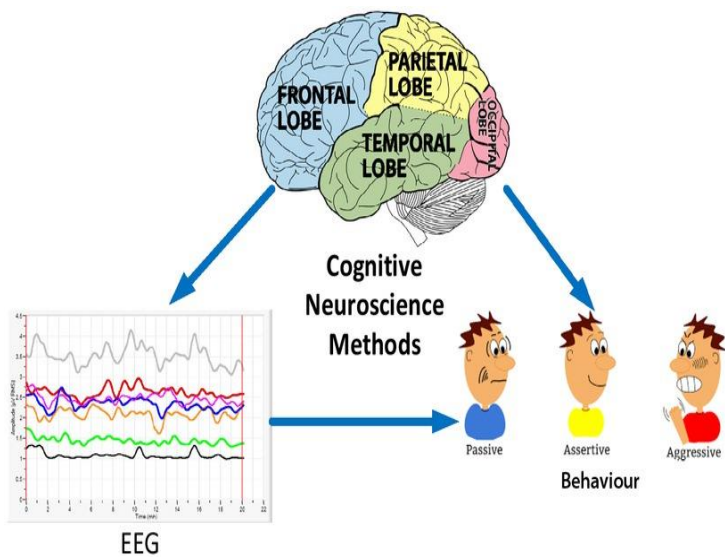
ELECTROMAGNETIC WAVES



VISIBLE SPECTRUM

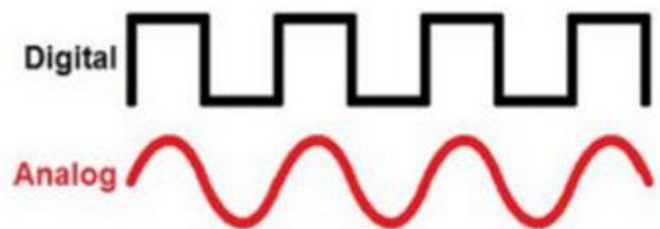
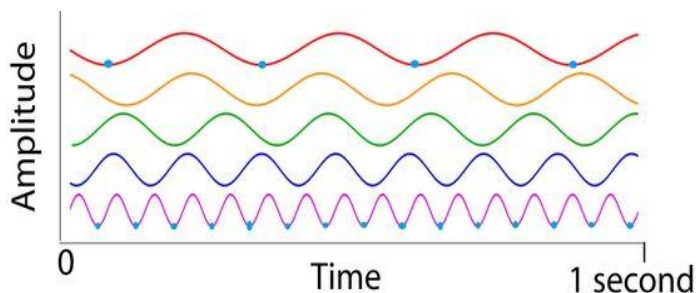


THE HUMAN BODY SENSES ENERGY THEN CONVERTS IT INTO ELECTRICAL SIGNALS



Type and Range		What it Does
Gamma Waves Higher than 30 Hz		While concentrating, focusing, and learning
Beta Waves 13 - 30 Hz		During most activities while awake
Alpha Waves 8 - 12.99 Hz		While relaxed or sleepy
Theta Waves 4 - 7.99 Hz		During stage 1 and 2 (light) sleep
Delta Waves 1 - 3.99 Hz		During stage 3 (deep) sleep

ANY SIGNAL CAN BE CONVERTED INTO A DIGITAL ONE



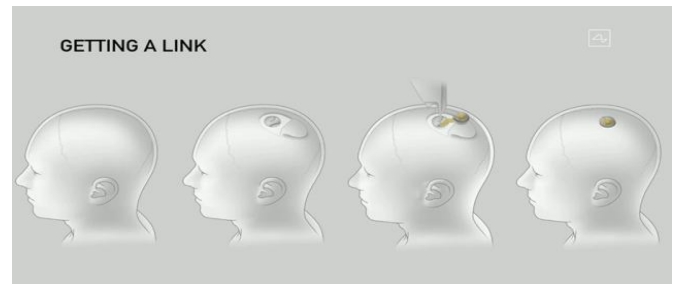
Between 1953 and 1966, the Central Intelligence Agency financed a wide-ranging project, code-named MKULTRA, concerned with *“the research and development of chemical, biological, and radiological materials capable of employment in clandestine operations to control human behavior.”*

THE MKULTRA PROGRAM EVENTUALLY TURNED INTO WHAT WE NOW CALL NEUROSCIENCE

Neuroscience is the [scientific study](#) of the [nervous system](#) (the [brain](#), [spinal cord](#), and [peripheral nervous system](#)), its functions and disorders. It is a [multidisciplinary](#) science that combines [physiology](#), [anatomy](#), [molecular biology](#), [developmental biology](#), [cytology](#), [psychology](#), [physics](#), [computer science](#), [chemistry](#), [medicine](#), [statistics](#), and [mathematical modeling](#) to understand the fundamental and emergent properties of [neurons](#), [glia](#) and [neural circuits](#). The understanding of the biological basis of [learning](#), [memory](#), [behavior](#), [perception](#), and [consciousness](#) has been described by [Eric Kandel](#) as the "epic challenge" of the [biological sciences](#).

The scope of neuroscience has broadened over time to include different approaches used to study the nervous system at different scales. The techniques used by [neuroscientists](#) have expanded enormously, from molecular and [cellular](#) studies of individual neurons to [imaging](#) of [sensory](#), [motor](#) and [cognitive](#) tasks in the brain.

IF YOU CAN WIRELESSLY CONTROL A HUMAN, WOULD YOU LET ANYONE KNOW?



Neuralink Corporation is an American [neurotechnology](#) company that is developing [implantable brain-computer interfaces](#) (BCIs), based in [Fremont, California](#) as of 2022. Founded by [Elon Musk](#) and a team of seven scientists and engineers, Neuralink was launched in 2016 and was first publicly reported in March 2017.

Since its founding, the company has hired several high-profile [neuroscientists](#) from various universities. By July 2019, it had received \$158 million in funding (of which \$100 million was from Musk) and was employing a staff of 90 employees. At that time, Neuralink announced that it was working on a "sewing machine-like" device capable of implanting very thin (4 to 6 [µm](#) in width) threads into the brain, and demonstrated a system that read information from a lab rat via 1,500 electrodes. They had anticipated starting experiments with humans in 2020, but have since moved that projection to 2023. As of May 2023, they have been approved for human trials in the [United States](#). <https://neuralink.com>

HOW DOES THE NEURALINK BRAIN CHIP WORK



1 The brain consists of special cells called neurons that transmit signals to other cells in the body, like our muscles and nerves.



2 The electrodes of the Neuralink chip are able to read these signals, which are then translated into motor controls

3

This could control external technologies, like computers or smartphones, or bodily functions, like muscle movement

COMPETITORS CAN DO THIS WITHOUT SURGERY

Compare Neuralink to Competitors



Kernel
Kernel is a human intelligence company. The company uses neurotechnology to build a comprehensive portfolio of brain...



Synchron
Synchron operates as a medical device company focusing on the development of minimally invasive neuromodulation...



Blackrock Neurotech
Blackrock Neurotech's mission is to provide tools and neurotech expertise to translate technology into implantable...



Paradromics
Paradromics provides high data-rate brain-computer interfaces (BCI). It enables better treatment options for neurodegenerative...



Neurable
Neurable develops brain-computer interface (BCI) technology. It uses electroencephalogram (EEG) activity and...



BrainUp
Naolu Technology (also known as BrainUp) focuses on the application of human brain cutting-edge technologies such as brain...

MOST PEOPLE DON'T KNOW ANYTHING ABOUT QUANTUM PHYSICS BUT WE USE IT EVERYDAY

5 WAYS YOU USE QUANTUM TECHNOLOGY EVERY DAY

The infographic is divided into five main sections, each with a diagram and explanatory text:

- COMPUTERS:** Shows a laptop and a smartphone with binary code. Below is a diagram of a **TRANSISTOR** with labels for SOURCE, GATE, DRAIN, N-TYPE, and P-TYPE. A circular inset shows a silicon wafer with the text "BILLIONS OF TRANSISTORS".
- LASERS:** Shows a laser pen and a laser beam. Below is a diagram of a **HELIUM NEON GAS LASER** with labels for POSITIVE TERMINAL, NEGATIVE TERMINAL, and MIRROR. It shows energy levels for Helium (He) and Neon (Ne) atoms, with labels like 20.61eV, 20.66eV, and 18.70eV. The process is labeled "STIMULATED EMISSION".
- G.P.S:** Shows a person on Earth receiving signals from **G.P.S SATELLITES**. Text indicates they are "ACCURATE TO 1 SECOND IN 1.4 MILLION YEARS". Below is a diagram of a **CAESIUM** atom.
- SOLAR PANELS:** Shows a solar panel array. Below is a diagram of **SPIN UP** and **SPIN DOWN** states with energy levels 9,192,631,770 Hz.
- OTHER QUANTUM TECH:** Includes **PHOTODETECTORS** (linked to a digital camera), **PHOTODETECTOR OR PHOTODIODE** (with a diagram showing P-TYPE, INTRINSIC LAYER, and N-TYPE regions), **SCANNING TUNNELLING MICROSCOPE**, and **DRUG DEVELOPMENT** (with a molecular model).

BY DOMINIC WALLIMAN © 2017
YOUTUBE : DOMAIN OF SCIENCE : 5 WAYS YOU USE QUANTUM TECHNOLOGY EVERY DAY

QUANTUM TECHNOLOGY AND NEUROSCIENCE HAVE BEEN AROUND FOR WELL OVER 50 YEARS

Particle physicists lend a hand to advance neuroscience

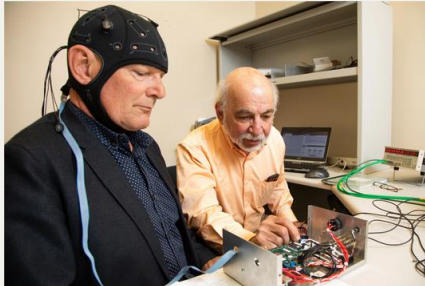
After meeting at a party, a Stanford psychologist and SLAC particle physicists have collaborated on a new kind of EEG device that can stimulate the brain and read out the effects.



BY NATHAN COLLINS

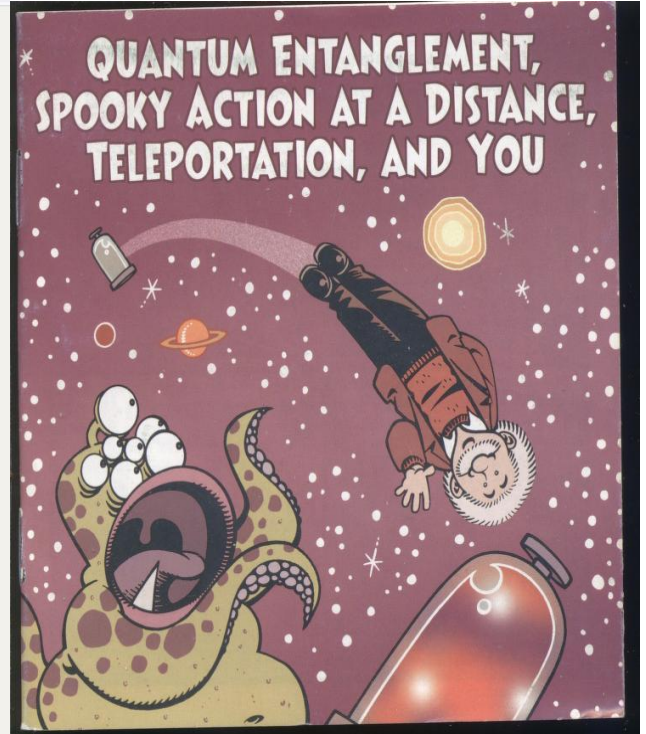
Psychologist **Anthony Norcia** had a problem. In his research untangling vision processing in the brain, he wanted to simultaneously zap the brain with electricity and measure the electrical aftereffects – two techniques commonly used to probe brain function, but never successfully combined.

Now, Norcia, who is a research professor in psychology, is on his way toward solving that problem, with help from experimental particle physicists at **SLAC National Accelerator Laboratory**. The collaboration with **Christopher Kenney**, a senior scientist at SLAC, and **Martin Breidenbach**, professor emeritus of particle physics and astrophysics, has helped Norcia develop tools that could change the way researchers study the brain. It has also given Kenney and Breidenbach a chance to apply their physics skills in a new field where they might someday make a difference in people's daily lives.

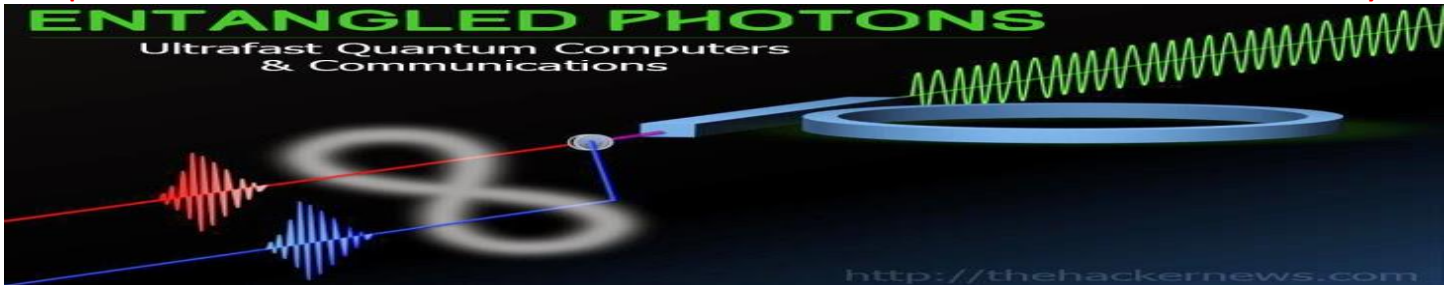


Anthony Norcia, left, and Martin Breidenbach examine an electroencephalogram device built to both electrically stimulate the brain and read the signals the brain generates in response. (Image credit: Dawn Harmer Photography)

"It's great science and you can have a societal impact," Kenney said. "There aren't too many things like that."



(REMOTE NEURAL MONITORING USES ENTANGLEMENT WHICH IS SPOOKY ACTION AT A DISTANCE)



IF YOU HAVE BEEN DOING THINGS BEHIND PEOPLE'S BACKS FOR DECADES WHAT WOULD YOU DO TO HIDE IT?

BLINK →

A "blink" happens when a drone has to move and there isn't another aircraft to continue watching a target. According to classified documents, this is a major challenge facing the military, which always wants to have a "persistent stare."

HOA ISR Orbits **Finding:** A key factor in Find/Fix failures is the frequent inability to maintain 24/7 **persistent stare** on active mission areas, especially when ISR is massed for Finishes **Recommendation:** Support Combatant Command (CCMD) requirements for additional ISR orbits to help prevent "blinking" on HVIs during demand surges

The conceptual metaphor of surveillance is seeing. Perfect surveillance would be like having a lidless eye. Much of what is seen by a drone's camera, however, appears without context on the ground. Some drone operators describe watching targets as "looking through a soda straw."

GANGSTALKING EXPLAINED BY THE DRONE PAPERS

