

FEATURED CONTENT / Remote Neural Monitoring Patents

Remote Neural Monitoring Patents: Brainwave Sensing, Communication, and Inner-Voice Research

A careful review of patents involving remote brainwave monitoring, brain-computer communication, emotion sensing, and inner-voice recovery-with the limits of each record stated plainly.

CLASSIFICATION

Patent Research Series

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EDITION

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THE COMPLETE CONTENT

Remote Neural Monitoring Patents: Brainwave Sensing,

Part 2 of 6 in the MaxisRichards.com Patent Research Series.

This entry separates genuinely contactless claims from patents that require electrodes, body-worn sensors, or trained user-specific signal mapping. That distinction is essential to accurate RNM research.

What a patent establishes: A patent records what an inventor claimed and disclosed. It does not, by itself, prove that every embodiment works as described, that a system was deployed operationally, or that it was used against any specific person. This series separates the patent record from interpretation.

Patent Records

The ability to read brain activity without contact-or to establish a twoway communication link with the brain-has been pursued for decades. These patents disclose methods for sensing EEGlike signals, interpreting mental states, and translating brain activity into commands or messages.

US3951134A - "Apparatus and method for remotely monitoring and altering brain waves" (Malech)

* Inventor: Robert G. Malech | Assignee: Dorne & Margolin Inc.

* Filed: August 5, 1974 | Granted: April 20, 1976

* Summary: Two electromagnetic signals are transmitted into the brain where they interfere; the retransmitted interference waveform is demodulated and used to monitor brainwave activity. The patent further describes transmitting a compensating signal back to the brain to alter that activity-a closedloop read/write system.

* TI community relevance: Often cited as the foundational remote neural monitoring (RNM) patent. It explicitly claims the ability to read brain states and write back an influencing signal.

* View patent

US6011991A - "Communication system and method including brain wave analysis and/or use of

brain activity" (Mardirossian)

* Inventor: Aris Mardirossian | Assignee: Technology Patents LLC

* Filed: December 7, 1998 | Granted: January 4, 2000

* Summary: Brain activity is monitored and transmitted to a remote station; stored patterns are compared to infer attempted communication, and in some embodiments electrodes are energized to fire specific brain nodes.

* TI community relevance: Describes brain-activity monitoring, pattern comparison, and-in some embodiments-stimulation through electrodes. The disclosed hardware requirements matter when comparing the patent with claims of contactless operation.

* View patent

US6529773B1 - "Communication and control by

means of brainwave and other processes causing

voltage changes that can be measured from the

body" (Dewan)

* Inventor: Edmond M. Dewan | Assignee: United States Department of the Air Force

* Filed: August 1, 2001 | Granted: March 4, 2003

* Summary: Alpha rhythms and other bodysurface voltage changes are used to operate binary communication systems and servomechanisms.

* TI community relevance: Documents Air Force-assigned work using measurable body-surface voltage changes for communication and control.

* View patent

US5638826A - "Communication method and system

using brain waves for multidimensional control"

(Wolpaw/McFarland)

* Inventors: Jonathan R. Wolpaw, Dennis J. McFarland | Assignee: Health Research Inc.

* Filed: June 1, 1995 | Granted: June 17, 1997

* Summary: A scalpelectrode EEG system that extracts murhythms to control a cursor in two dimensions, enabling communication and control of external devices.

* TI community relevance: Documents an early EEG-based brain-computer interface using scalp electrodes to control an external system.

* View patent

US9819782B1 - "Neurological communication

device" (Daniels)

* Inventor: Shavar Daniels | Assignee: David Lempert

* Filed: February 7, 2017 | Granted: November 14, 2017

* Summary: An earworn device detects brainwave activity and converts it to radiowave command signals; claims transmission through antennas and satellites to a second earworn device.

* TI community relevance: This is a wearable-device architecture. It should not be represented as evidence of contactless brain reading.

* View patent

US5507291A - "Method and apparatus for remotely

determining information as to person's

emotional state" (Stirbl/Wilk)

* Inventors: Robert C. Stirbl, Peter J. Wilk

* Filed: April 5, 1994 | Granted: April 16, 1996

* Summary: Waveform energy is transmitted toward a remote subject; responsive energy is detected and analyzed against stored physiologicalparameter references (pulse, respiration, pupil size, perspiration) to infer emotional state.

* TI community relevance: Documents remote physiological sensing used to infer emotional state; it does not claim direct decoding of thoughts.

* View patent

US10159435B1 - "Emotion sensor system"

(Brankovic)

- * Inventor: Veselin Brankovic | Assignee: Novelic doo
- * Filed: September 29, 2017 | Granted: December 25, 2018
- * Summary: A contactless 60 GHz millimeterwave radar sensor infers emotional state from heartbeat, respiration, and movement patterns.
- * TI community relevance: Documents contactless radar-based inference from heartbeat, respiration, and movement patterns.
- * View patent

US10573335B2 - "Methods, systems and

apparatuses for inner voice recovery from

neural activation relating to subvocalization"

(Moghadamfalahi et al.)

- * Inventors: Mohammad Moghadamfalahi, Umut Orhan, Michael Dillard
- * Assignee: Honeywell International Inc.
- * Filed: March 20, 2018 | Granted: February 25, 2020
- * Summary: Uses bodyconnected sensors to detect neural correlates of subvocalized speech and recover the intended words. The patent explicitly calls this "synthetic telepathy."
- * TI community relevance: The patent uses "synthetic telepathy" in its background discussion, while the claimed system relies on body-connected sensors and trained signal mapping.
- * View patent

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Research

* Electromagnetic Neuromodulation Patents: Nervous-System Effects, Sensory Resonance, and RF Systems

* Synthetic Telepathy and Ultrasound Patents: Direct Communication and Noninvasive Neuromodulation

* Subliminal Influence Patents: Silent Messaging and Behavior-Modification Systems

* Dream and Sleep Manipulation Patents: REM Detection, Sensory Input, and Sleep-State Technology

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