

Title (en)

METHOD AND APPARATUS FOR NEURAL-SIGNAL CAPTURE TO DRIVE NEUROPROSTHESES OR CONTROL BODILY FUNCTION

Title (de)

VERFAHREN UND VORRICHTUNG ZUR NERVENSIGNALERFASSUNG FÜR DIE ANSTEUERUNG VON NEUROPROTHESSEN ODER ZUR STEUERUNG VON KÖRPERFUNKTIONEN

Title (fr)

PROCÉDÉ ET APPAREIL DE CAPTURE DE SIGNAL NEURAL POUR ENTRAÎNER DES PROTHÈSES NEURALES OU COMMANDER UNE FONCTION CORPORELLE

Publication

EP 2312992 A1 20110427 (EN)

Application

EP 09798842 A 20090717

Priority

- US 2009051080 W 20090717
- US 8173208 P 20080717

Abstract (en)

[origin: WO201009452A1] Method and apparatus for detecting nerve activity of an animal Some embodiments include outputting a light pulse having a wavelength onto a volume of animal tissue such that the light pulse interacts with active nerves of the tissue, measuring a light signal resulting from the interaction of the light pulse with the tissue, transmitting an electrical signal based on the measured light signal, signal-processing the electrical signal, and outputting a response signal, which can optionally be used to control a prosthetic device, stimulate another nerve, or display/ diagnose a condition Some embodiments output a plurality of light wavelengths and/or pulses, which are optionally high-frequency intensity modulated Some embodiments analyze DC, AC, and phase components of signals to spatially resolve locations of neural activity Some embodiments output light pulse(s) and detect the resultant light from outside a human skull to detect neural activity of human brain tissue inside

IPC 8 full level

A61B 1/06 (2006.01); **A61B 5/04** (2006.01)

CPC (source: EP)

A61B 5/0059 (2013.01); **A61B 5/4064** (2013.01); **A61B 5/407** (2013.01); **A61N 1/36003** (2013.01); **A61B 5/4047** (2013.01)

Designated contracting state (EPC)

AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO SE SI SK SM TR

Designated extension state (EPC)

AL BA RS

DOCDB simple family (publication)

WO 201009452 A1 20100121; CA 2731064 A1 20100121; EP 2312992 A1 20110427; EP 2312992 A4 20130424

DOCDB simple family (application)

US 2009051080 W 20090717; CA 2731064 A 20090717; EP 09798842 A 20090717