

Title (en)
MEASURING AND STRENGTHENING PHYSIOLOGICAL/NEUROPHYSIOLOGICAL STATES PREDICTIVE OF SUPERIOR PERFORMANCE

Title (de)
MESSUNG UND VERSTÄRKUNG VON PHYSIOLOGISCHEN/NEUROPHYSIOLOGISCHEN ZUSTÄNDEN ZUR VORHERSAGE ÜBERLEGENER LEISTUNG

Title (fr)
MESURE ET RENFORCEMENT D'ÉTATS PHYSIOLOGIQUES/NEUROPHYSIOLOGIQUES PRÉDICTIFS D'UNE PERFORMANCE SUPÉRIEURE

Publication
EP 4157089 A4 20231101 (EN)

Application
EP 21813613 A 20210524

Priority

- US 202063029475 P 20200524
- US 202063051224 P 20200713
- US 202163142227 P 20210127
- US 2021033902 W 20210524

Abstract (en)
[origin: WO2021242691A2] To identify physiological states that are predictive of a person's performance, a system provides physiological and behavioral interfaces and a data processing pipeline. Physiological sensors generate physiological data about the person while performing a task. The behavioral interface generates performance data about the person while performing the task. The pipeline collects the physiological and performance data along with reference data from a population of people performing the same or similar tasks. In various implementations, the physiological states are brain states. In one implementation, the pipeline computes bandpower ratios. In another implementation, the pipeline decomposes the physiological data into frequency -banded components, identifies brain states derived from the decomposed data — for example, clusters of correlations of decomposed data envelopes—grades the performance data, compares the graded performance data to the brain states, and identifies statistical relationships between the brain states and levels of performance.

IPC 8 full level
A61B 5/16 (2006.01); **A61B 5/369** (2021.01); **G06N 20/00** (2019.01)

GPC (source: EP)
G06N 3/044 (2023.01); **G06N 3/08** (2013.01); **G06N 7/01** (2023.01); **G06N 20/00** (2018.12); **G16H 20/70** (2017.12); **G16H 50/20** (2017.12); **A61B 5/369** (2021.01)

Citation (search report)

- [X] US 2020008725 A1 20200109 - BACH DAVID [US], et al
- [Y] US 2016242690 A1 20160825 - PRINCIPE JOSE C [US], et al
- [Y] US 2016302720 A1 20161020 - JOHN ERWIN ROY [US], et al
- [Y] US 2009171942 A1 20090702 - SURESH BIPIN [IN], et al
- [A] US 2015199010 A1 20150716 - COLEMAN TREVOR CE [CA], et al
- See references of WO 2021242691A2

Designated contracting state (EPC)
AL 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 RS SE SI SK SM TR

DOCDB simple family (publication)
WO 2021242691 A2 20211202; WO 2021242691 A3 20211230; CA 3174397 A1 20211202; EP 4157089 A2 20230405; EP 4157089 A4 20231101

DOCDB simple family (application)
US 2021033902 W 20210524; CA 3174397 A 20210524; EP 21813613 A 20210524