AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings of claims in the application.

Listing of Claims:

1. (Canceled)

2. (Currently amended) The method of ~~claim 1~~ claim 14 wherein the activity change is a change between the subject interfacing with a graphical user interface (GUI) to the subject manipulating a physical device.

3. (Original) The method of claim 2 wherein the activity change is from the subject interfacing with a graphical user interface (GUI) to the subject manipulating a physical device.

4. (Original) The method of claim 2 wherein the interfacing with the GUI involves moving a cursor, entering text, or selecting words, and the manipulating a physical device involves operating a robotic arm or steering a wheelchair.

5-7. (Canceled)

8. (Currently amended) A method of interpreting signals from a brain-machine interface (BMI), the method comprising:

receiving a first set of neural signals from a brain of a subject into a BMI decoder;

translating, using a first model in the BMI decoder, the first set of neural signals into a first command;

detecting, from further neural signals from the subject, a frustration from the subject;

inhibiting the first command by sending a cancelation of the first command, the inhibiting based on the detecting;

routing a second set of neural signals from the brain of the subject to a second model in the BMI decoder based on the detecting;

interpreting, using the second model, the second set of neural signals into a second command; and

sending the second command.

9. (Canceled)

10. (Original) The method of claim 8 wherein the second command is sent to a cursor, a keyboard, a robotic arm, or a wheelchair.

11. (Original) The method of claim 8 wherein the neural signals pass through metal electrodes in a cerebral cortex of the brain.

12. (Original) The method of claim 11 further comprising:

converting, through an analog-to-digital converter (ADC), voltages or currents from the electrodes;

detecting spikes from the voltages or currents; and

forwarding the spikes as the neural signals.

13. (Original) The method of claim 8 wherein the first or second model includes binning neural spikes as a function of frequency.

14. (Original) A method of adjusting an implanted or wearable brain-machine interface (BMI) device, the method comprising:

receiving neural signals from a brain of a subject into an implanted or wearable BMI device;

determining an activity change of the subject based on a sensor;

switching from a first compression algorithm to a second compression algorithm based on the determined activity change;

compressing, using the second compression algorithm in the BMI device, the neural signals into a data stream;

sending the data stream to a BMI controller off-board the subject.

15. (Original) The method of claim 14 wherein the neural signals pass through metal electrodes in a cerebral cortex of the brain.

16. (Original) The method of claim 15 further comprising:

converting, through an analog-to-digital converter (ADC), voltages or currents from the electrodes;

detecting spikes from the voltages or currents; and

forwarding the spikes as the neural signals.

17. (Original) The method of claim 14 wherein the first or second model includes binning neural spikes as a function of frequency.