

Advanced Bionics

NervusTec



Mind-controlled Devices – Educational Kit

Integrating cure and education

Target Users

1

Children aged 14-18 who want to learn something new or touch "technologies of the future" and decide what they want to do in life.

2

Young people aged 18-25, students or graduates of universities or colleges who want to improve their skills in the field of creating mind-controlled devices or learn how to create them.

PROBLEM

**There are few educational solutions
in the world that can be used to
teach – practically – how to create
mind-controlled devices.**



Mind controlled?

Any mental command to do something is a signal from the brain to the nervous system.

It is possible to control electronic devices by registering brain signals in the nervous system.

Examples of mind-controlled devices

- **Mind-controlled hand prosthesis**
- **Mind-controlled writing devices**
- **Rehabilitation of brain function**



What we do

We are developing an educational kit "NervusTec" for learning in the creation of mind-controlled devices



Our purpose is to increase the availability of educational materials teaching how to create mind-controlled devices

The kit consists of two modules

«Mind-controlled Robotics»

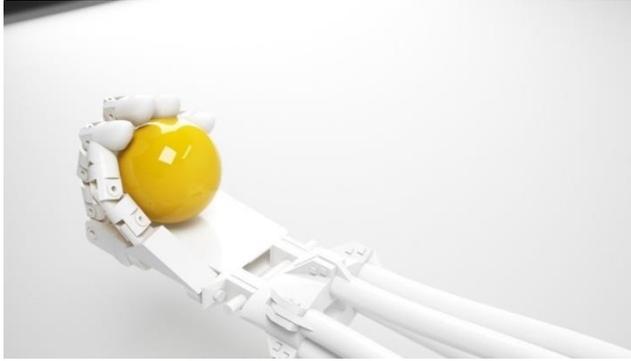
As part of the "Robotics mind controlled" module, a person will learn the practical use of myointerfaces (EMG), using the example of assembling a model of a bionic arm prosthesis



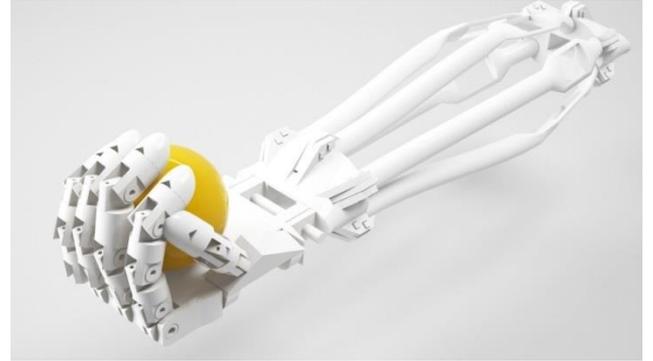
«Wearable Neuro Devices»

As part of the "Wearable neuro devices" module, a person will learn the practical use of neural interfaces (EEG), using the example of assembling various neurodevices, for example, the Brainball game.

What we do



Concept art of
the «Robotics
mind controlled»
module



Concept art of
the «Wearable
neuro devices»
module



«Mind-controlled Robotics»

Educational module
Assembling a bionic prosthetic hand

Learning Process

The set helps learn applied neurotechnologies by analyzing EMG signals (registration of bioelectrical activity of muscles) and reacting to EMG signals.



Results

- Knowing how to use EMG interface, analyze EMG signals and make decisions
- Bionic prosthetic hand assembling skills

«Wearable neuro devices»

Educational module

Assembling devices with neural interface

The kit allows you to deepen your knowledge in the field of applied neurotechnologies using the example of an EEG interface (registration of brain activity)



By the end of the module, the person will have assembled several devices based on the EEG interface, and will have all the knowledge how to assemble it and how to use the EEG interface, including in other projects.

Learning Process

«Mind-controlled Robotics»



1. Creation of the mechanics of the prosthesis
2. Circuitry (taking into account the specifics of working with an EMG signal)
3. Physiology of the EMG signal
4. EMG signal processing
5. 3D modeling and 3D printing

«Wearable neuro devices»



1. EEG signal processing
2. Physiology of the EEG signal
3. Circuitry (taking into account the specifics of working with the EEG signal)
4. 3D modeling and 3D printing

Target Customers

Schools of robotics
Robotics courses

Parents of
children aged
14 to 25

Stores selling
educational
kits

Students
18 - 25
years old

Competitors

Constructor kit "Young Neuromodeler"
by BiTronics Lab



LEGO Mindstorms
construction set



Competitive Analysis

Constructor kit "Young Neuromodeler"
by BiTronics Lab

Can register human neurosignals
but
there is no educational function

LEGO Mindstorms
construction set

There is educational function
but
cannot register human neurosignals.

Mind controlled devices educational kit "NervusTec"
can both
register human neurosignals
and
, be used in practical educational programs

Team to Save the World

Our job is to make learning the technologies of the future accessible.



Mikhail Shevnin

Engineer, teacher



Kirill Lakhminov

**Team leader,
engineer, teacher**



Valery Proshkin

**Marketing, external
communications**



Vadim Kotelinkov

Mentor

Thank you for watching!

