Personal Communicator for People Who Have Hard Problems with Moving Functions and Speech

Sarantsev, Aleksandr

The goal of work is creation of device: Personal communicator for people who have hard problem with moving function and speech. The new way of communication for such people with other is offered. It uses an electrical activity produced by “working” skeletal muscle and transforms this activity to basic speech. The principle of this work is based on method of electromyography. The advantage of this method is easy connection of sensors for getting signals. Originality of the developed device is that coding of bioelectric potentials is carried out by means of the code based on impulse length. It allows to adapt this device to the people with different disabilities of moving functions and speech. Signal is transmitted to the receiver by wireless channel and the receiver plays the sound file from the SD-card corresponding to this code. The new feature is a power outlet for control home electronics operated by special commands. It gives additional opportunities for people who have hard problem with moving function and speech. The usage of this device helps people with disabilities expand communication with people around.

Awards Won: