



SCMS SCHOOL OF ENGINEERING & TECHNOLOGY

PATENTS PUBLISHED

SINO	YEAR	TITLE OF INVENTION	APPLICATION NUMBER	APPLICANT NAME
1	16-11-2018	Self assistive brain body control physiotherapy device	201841042113	Dr. Sunil Jacob
2	16-11-2018	DE-ADDICTO (Non- Invasive anti-depression and drug rehab E-M stimulator	201841042115	Dr. Sunil Jacob
3	28-09-2018	MEDICOS(Medical kiosk: A Mini virtual hospital for villages	201841034922	Dr. Sunil Jacob

1. Self assistive brain body control physiotherapy device

We know somebody or other in our relation directly or indirectly suffering paralysis due to stroke. According to survey the paralysed person due to stroke are 1 in 25. From normal human, they are having one degree of separation in terms of movable body parts. According to Reeve Foundation 29% of paralysis is due to stroke followed by injury in the spinal cord. This makes urgency in developing an interface which can make their living condition better. The paralysed person cannot do its daily chores without any physical assistant. Sometimes it may be difficult for a person to move the paralysed person's body part as it may be too stiff. The physiotherapy may not be always available for paralysed person. We are proposing a system which will assist not only the paralysed person, but all.

The first fold of our project is to design and implement a fully functional Muscle to Machine interface for Paralysed person (MMIP) interface. The MMIP interface should have the provision for pre-processing classifying recording and training multidimensional EMG signals. The classifier module and the pre-processor module should be implemented separately for easy testing and modification of different phases. To accomplish the first phase of the research a thorough literature review for the different Machine to Brain interface has been done. In the second fold of the research, the developed MMIP system should be tested on the paralyzed person. The Muscle movement has to be recorded during voluntary movement. When the controlling person does the real time activities it has to be detected and categorized into two dimensional movement.

The research procedure is as follow the controlled person is interfaced with MMIP with the movable human part of the controlling person. The MMIP generate electrical stimulation and in response to the stimulus the subject under test that is controlled person perform its operations. During the operation, the MMIP record the EMG signals process it and classify it to different operations. The recorded operation is compared with the actual operations. The performance accuracy is measured

Application Details

APPLICATION NUMBER	201841042113
APPLICATION TYPE	ORDINARY APPLICATION
DATE OF FILING	08/11/2018
APPLICANT NAME	Dr. JACOB SUNIL
TITLE OF INVENTION	SELF-ASSISTIVE BRAIN/BODY CONTROL PHYSIOTHERAPY DEVICE
FIELD OF INVENTION	BIO-MEDICAL ENGINEERING
E-MAIL (As Per Record)	
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E-MAIL (UPDATED Online)	
PRIORITY DATE	NA
REQUEST FOR EXAMINATION DATE	08/11/2018
PUBLICATION DATE (U/S 11A)	16/11/2018

2. DE-ADDICTO (Non- Invasive anti-depression and drug rehab E-M stimulator)

The current youth are suffering with different types of depression and brain disorder. This prototype helps the depressed person to come out of that stage. This is achieved by controlling the dopamine level in the synapse region of the neurons in the brain by using the EM stimulating coil. This E-M coil can stimulate the neuron which secretes the dopamine. This magnetic stimulation can be reduced slowly and the dopamine level can be maintained normal.

The depressed and brain disorder are treated by different types of depression and brain disorder medicines. These medicines have a lot of side effects. The proposed anti depression coil is completely non-invasive. The three modules. The human body is completely transparent to magnetic field. The magnetic coil previously was used for message and relaxation. The same concept with a controlled pulse generation and intensity control will serve the purpose of controlling the

dopamine level in the neuron. The same concept can be used by electrical stimulation. In our prototype, the magnetic pulse can be controlled; its intensity and the position of the coil can be changed depending on the different types of depression and brain disorder.

Application Details	
APPLICATION NUMBER	201841042115
APPLICATION TYPE	ORDINARY APPLICATION
DATE OF FILING	08/11/2018
APPLICANT NAME	Dr. JACOB SUNIL
TITLE OF INVENTION	DE-ADDICTO (NON-INVASIVE ANTI-DEPRESSION AND DRUG-REHAB E-M STIMULATOR)
FIELD OF INVENTION	ELECTRONICS
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3. MEDICOS (Medical kiosk: A Mini virtual hospital for villages)

The kiosks are computer terminals that can guide the patients to access the right medicine and treatment at the time of need. Patients can also get notifications regarding medical camps, mobile medical help, important dates for vaccination, child care, insurance policies etc. It serves the patients to fulfil their basic needs such as measurement of height, weight, BMI, blood pressure and heart beat. Furthermore, live consultation facilities with specialized doctors through video and voice chats can improve the living standards of the rural society. The prescribed medicines can be instantly vended out from the kiosk. The machine completely eliminates the need for man power which in turn increases its working efficiency and effectiveness.

The implementation of the above mentioned solution has both hardware and software requirements. The idea is to create GUI and integrate all the required components into a single system. Connecting all systems to user and vice-versa is done by means of IoT technology.

This project will be a great innovation in the field of medicine in rural areas. The machine can be placed at any accessible point within the village so that the villagers will no longer have to travel long distances for medical aid. Since all updated information and medical facilities are readily available, this can definitely put an end to crisis faced, especially during emergency situations. This can also avoid fraud malpractices in the name of health care to a great extent. Ultimately, the culminated result can offer a new panorama in the field of rural medicine, proffering self-empowerment to the Indian villages



Controller General of Patents, Designs and Trademarks
Department of Intellectual Property and Innovation
Ministry of Commerce and Industry

Application Details

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TITLE OF INVENTION	MEDICOS (MEDICAL KIOSK: A MINI VIRTUAL HOSPITAL FOR VILLAGES)
FIELD OF INVENTION	NO SUBJECT
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Application Status

APPLICATION STATUS

Application Awaiting Examination

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