

(54) Title of the invention : A system and method to control a pneumatic medical bed through electroencephalography signals

(51) International classification :A61B0005000000, A61G0007050000, A61G0007012000, A61G0007015000, A61B0005047600 (86) International Application No :PCT// Filing Date :01/01/1900 (87) International Publication No : NA (61) Patent of Addition to Application Number :NA Filing Date :NA (62) Divisional to Application Number :NA Filing Date :NA	(71)Name of Applicant : 1)INDIAN INSTITUTE OF TECHNOLOGY (INDIAN SCHOOL OF MINES), DHANBAD Address of Applicant :Dhanbad -826004, Jharkhand, India Dhanbad ----- Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)Manmohan Labh Address of Applicant :B-602, Gorbandh Sec-15, Plot-10, Sanpada Palm Beach, Navi Mumbai, Maharashtra - 400705, India Navi Mumbai ----- 2)Yalla Mark Vishal Address of Applicant :D.no: 13-64/13, Madhuranagar, Gandhinagar, Anakapalli, Vishakapatnam - 531001, Andhra Pradesh, India Vishakapatnam ----- 3)Inampudi Sai Amith Address of Applicant :1-3-339, Gunj Road, Bodhan, Nizamabad, Telangana - 503185, India Nizamabad ----- 4)Ashish Siddharth Address of Applicant :Village: Merha, Post Office: Chirkunda, District: Dhanbad, Jharkhand - 828202, India Dhanbad ----- 5)Zafar Alam Address of Applicant :128-B, Department of Mechanical Engineering, INDIAN INSTITUTE OF TECHNOLOGY (INDIAN SCHOOL OF MINES), DHANBAD, Dhanbad - 826004, Jharkhand, India Dhanbad -----
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(57) Abstract :

The present invention relates to a system (200) and method to control a pneumatic medical bed through electroencephalography (EEG) signals. In this invention, the medical bed (1) is powered by a pneumatic cylinder actuator (8) whose movement is controlled by the patient's brain. The patient tries to send a 'Lift-up' or 'Lower-down' signal to adjust the height of the bed (1) in order to calibrate its 'comfort pose'. Once the comfort pose is achieved, the pose of the actuator (8) is recorded in the application programming interface (API) using the feedback signal from the position sensor (2) mounted on top of the pneumatic cylinder actuator (8). Later, the patient only has to think of the 'comfort pose' to align the position of its hospital bed at the desired comfortable position. The present invention aims to help paralytic/severely affected patients to control the position of their pneumatic bed by the brain through an EEG device.

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