Evaluating User Gestures in Rehabilitation from Electromyographic Signals

One of the strategies being used over the last years to increase the user commitment and motivation on rehabilitation systems is the use of virtual reality (VR) environments. In addition to contributing to motivation, these systems can simulate real life activities and provide means to measure and evaluate user performance. The use of natural interaction devices originally conceived to the game market allowed the development of low-cost and minimally invasive systems. With the advent of interaction devices based on electromyography, the electromyographic signals of the user can also be used on the natural interaction process. This work has as goal to verify if, by using a evaluation model, is possible to evaluate user performance in real time through gesture recognition by means of an electromyography device attached to a rehabilitation system.