Abstract

EMAT is a clinical tool that will assist in providing a quantitative analysis of a patients gross motor skills. Prior to this summer, a tremor monitoring tool was coded. During the 2014-2015 school year, the tool was tested in clinics by OT students. They piloted the use of the tremor tool with 3 subjects. The data from those subjects will allow us to improve the algorithm for this tool. The primary function of the EMAT is to monitor flexion/extension, ab/adduction, and internal/external rotation about a joint using two sensors. With one sensor on either side of the joint, the difference between the two sensors is used to determine orientation of the joint. This data will be used for a variety of real-time rehabilitation and assessment tasks, such as manipulating an object on the screen to match another. The tool can be used to help rehabilitate specific motion tasks or to improve or assess range of motion. This summer's work is focused on developing the joint orientation tools.