
E9: Thought Controlled Access to Independent Control of a Mobility Base – From Fantasy to Reality

4. <https://mobilitymgmt.com/articles/2010/08/01/single-switch-driving.aspx>

Tracee-lee Maginnity, OT

Rob Wong

Peter Ford

Learning objectives:

1. By the end of the session participants will be able to identify at least 3 barriers to mechanical switch access
2. Following this session participants will be able to identify clients who have potential to use neural switching
3. Participants will gain an understanding of how EMG can be used to operate a switch

Session description:

Over the past few years technological advancements have brought the concept of thought control of assistive technology devices into reality via neural switching. Single switch scanning and developments in eye gaze technology has been a viable way to provide independent mobility for individuals with limited active muscle control but still presents significant limitations and occlusions

This session will look at some of the limitations and considerations required for switch activation in relation to accessing assistive technology including mobility and introduce participants to the concept of neural switching.

What is neural switching and how it works will be explained and demonstrated. We will look at what devices can currently communicate with neural switching and how this technology can be integrated into enabling independent control of powered mobility bases in the future.

Content references:

1. R&D Control Bionics
2. <http://www.rehab.research.va.gov/jour/00/37/5/angelo.html>
3. <http://www.cs.uml.edu/~holly/publications/PDF/yanco-gips-resna98.pdf>