



## Automated Constraint-Induced Therapy Extension (VA Reference No. 05-119)

*Novel device used to automate the training portion of constraint-induced movement therapy resulting in greatly reduced therapist supervision*

### Technology

Device used to automate the training portion of constraint-induced movement therapy

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### Key Features

- Reduces the cost of constraint-induced movement therapy
- Demonstrated efficacy in clinical studies
- Provides enduring therapeutic benefits
- Enhanced range of application

### Stage of Development

Reduced to practice with prototype system developed

### Keywords

- Rehabilitation
- Stroke Rehabilitation
  - Constraint-induced Movement Therapy
  - Software

### Patent Status

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### Contact

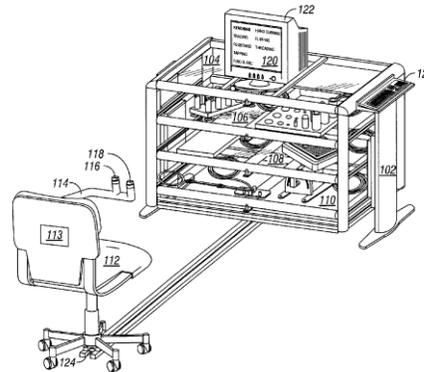
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### Technology

The Department of Veterans Affairs has developed a device termed AutoCITE (automated CI therapy extension) that automates the training portion of constraint-induced movement (CI) therapy.

### Description

The AutoCITE system developed by the VA employs easy-to-use software to guide the user through therapy exercises. The activities are the same as those employed in conventional CI therapy. Sensors measure key aspects of the task, and performance is automatically measured. In addition, performance-based audible and visual feedback is provided to the patient.



### Competitive Advantage

Despite demonstrating clinical efficacy and lasting benefits, CI therapy requires substantial one-on-one therapist time, making it one of the most costly stroke rehabilitative therapies. AutoCITE was developed in an attempt to reduce the costly therapist time of CI therapy through partial supervision and more efficient feedback.

This invention:

- Could potentially reduce the cost of therapy by allowing participants to perform the training in the clinic with only partial therapist supervision.
- Has been shown by various imaging methods to be one of the few physiotherapies capable of inducing reorganizational changes in the cerebral cortex.
- Has utility in the rehabilitation of patients afflicted with motor dysfunction resulting from traumatic brain injury, cerebral palsy, multiple sclerosis and spinal cord injury (non-severed).

### Status

The Department of Veterans Affairs is looking for a partner for further development and commercialization of this technology through a license, and the VA inventors are available to collaborate with interested companies through a Cooperative Research and Development Agreement (CRADA).