ANNEX I

FACTSHEET

Development of the
Temasek Cares – Technology-assisted Rehabilitation in the Community
(Temasek Cares - TRiC)

Singapore Polytechnic developed the Temasek Cares - Technology-assisted Rehabilitation in the Community (Temasek Cares - TRiC) programme to address three areas: Manpower, Measurement and Motivation for rehabilitation in the Community Care sector.

Manpower
The technology-assisted equipment implemented in the Day Rehabilitation Centres (DRC) will aid therapists in their rehabilitation exercises for clients. This will result in increased productivity as therapists can attend to more than one client in the same amount of time.

Measurement
A monitoring progress system is built into the equipment used to ensure accurate tracking of the clients' recovery progress. This will also reduce the time and effort taken by therapists to manually track and document the progress.

Motivation
Incorporates user-friendly and interactive games, visuals and sounds in the assistive technology equipment to engage clients, making rehabilitation fun and interactive to motivate the clients.

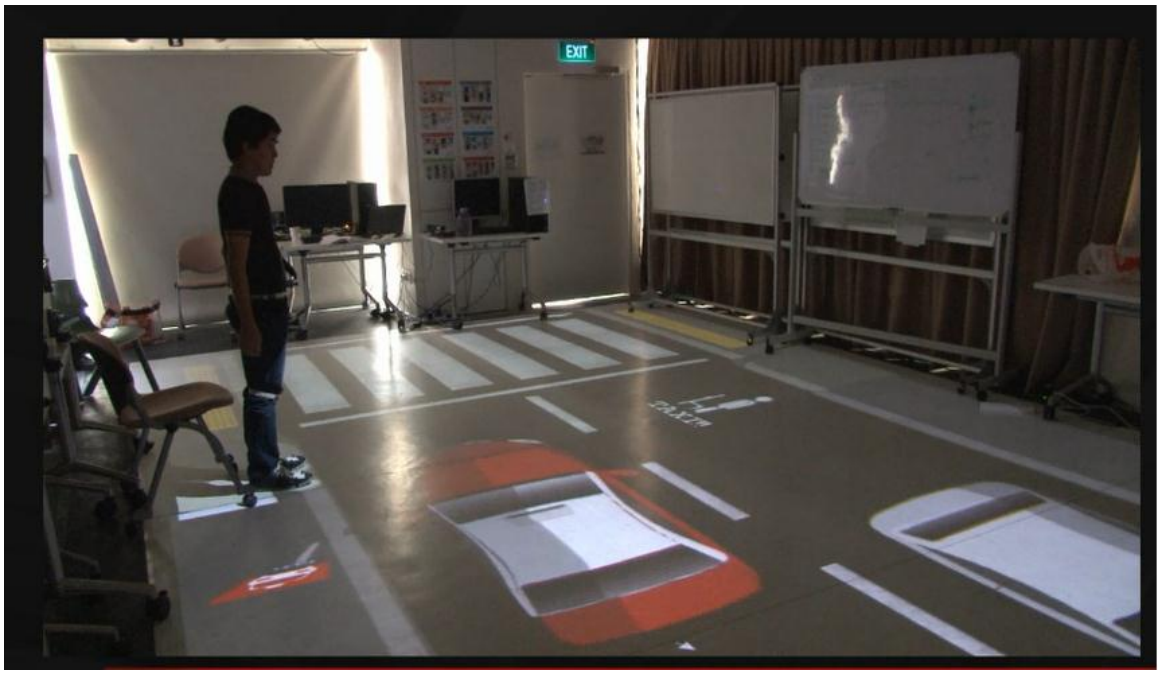
Projects under the Temasek Cares - TriC

Bilateral Limb Manipulator
- The Bilateral Limb Manipulator utilises the movements of robotic functional arms to facilitate the movements of the client's affected limb.
- The equipment will be attached to the client. It then automates active mobilisation techniques in a particular direction several times, replicating the support and exercise conducted for the client by the therapist.
- The equipment is also attached to a monitor and provides audio and visual feedback to the client and therapist.

(Picture above: Bilateral Limb Manipulator)

Floor Projection System

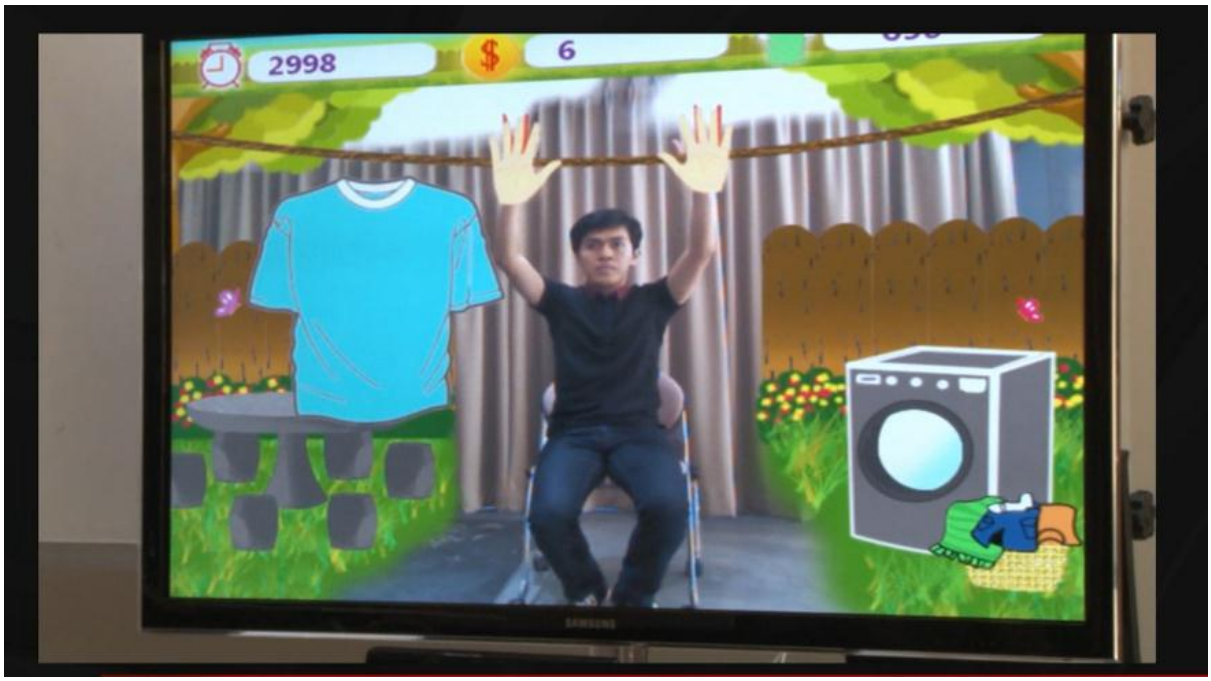
- The Floor Projection System is a lower limb rehabilitation equipment which assists to improve the client's walking and mobility.
- The system projects an augmented reality environment onto the floor from an overhead projector. The client will respond according to the projected scene he sees.
- Sensors will be attached to the client's lower limbs to monitor and adjusts the interactive environment based on the client's progress.



(Picture above: Floor Projection System)

Augmented Reality Games for Therapy

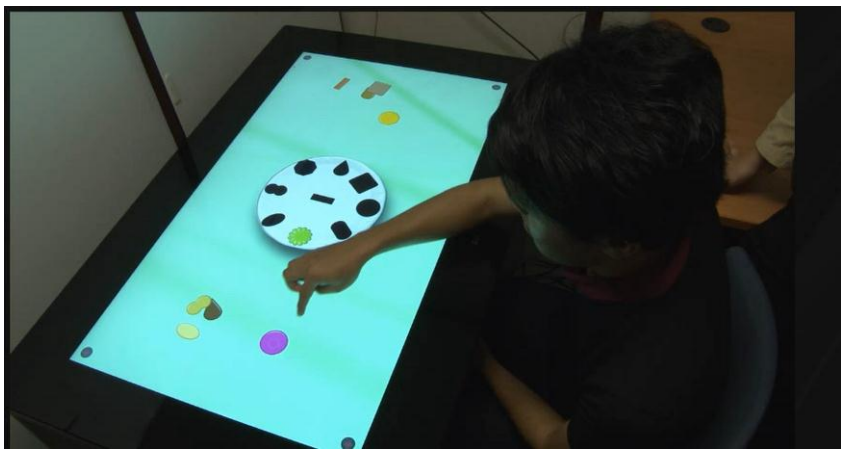
- Augmented Reality Games for Therapy is an upper limb rehabilitation therapy equipment which involves a motion-sensor to monitor the client's movement. His movement is projected onto an interactive augmented reality platform.
- The games programmed into the equipment utilises a natural user interface such as gestures and motions, which encourages the client to exercise his limbs while playing the games.
- The interactive games also provide scores and offer immediate feedback to detect and correct movements.



(Picture above: Augmented Reality Games for Therapy)

Computer-based Cognitive Training

- Computer-based Cognitive Training allows therapists to conduct structured, progressive and interactive cognitive therapy with several clients at the same time through the use of a computer system.
- The equipment involves games such as puzzles and memory card games.
- This training will convert conventional rehabilitation efforts into an electronic format.



(Picture above: Computer-based Cognitive Training)