

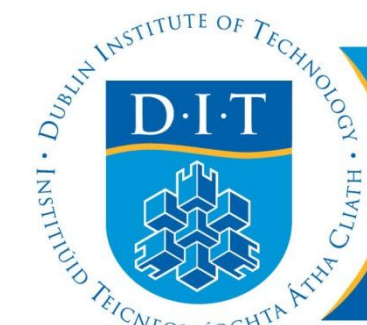


students learning with communities

Participatory Design for Adaptable Assistive Technology



Students Learning with Communities



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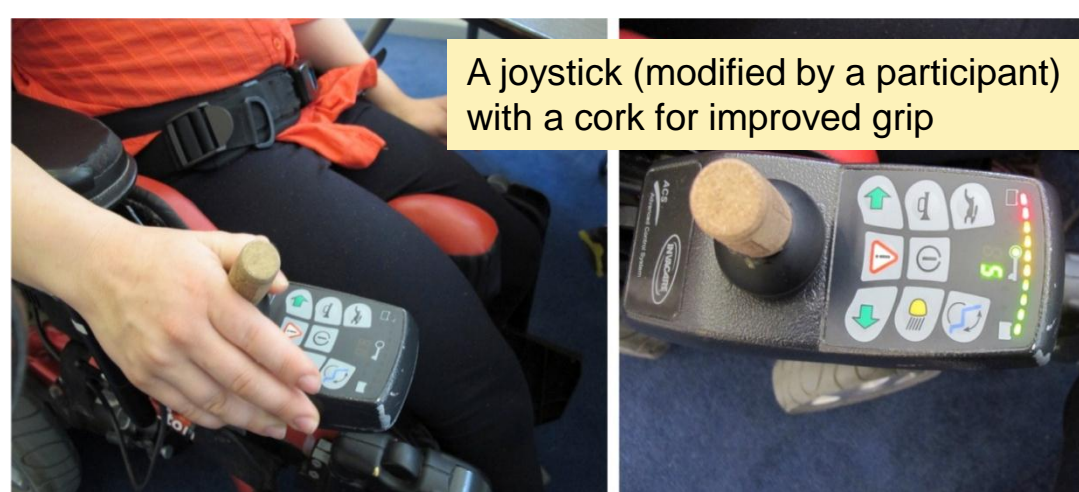
Materials at the workshop in the Central Remedial Clinic



Design Dishes created by participants



A joystick (modified by a participant) with a cork for improved grip



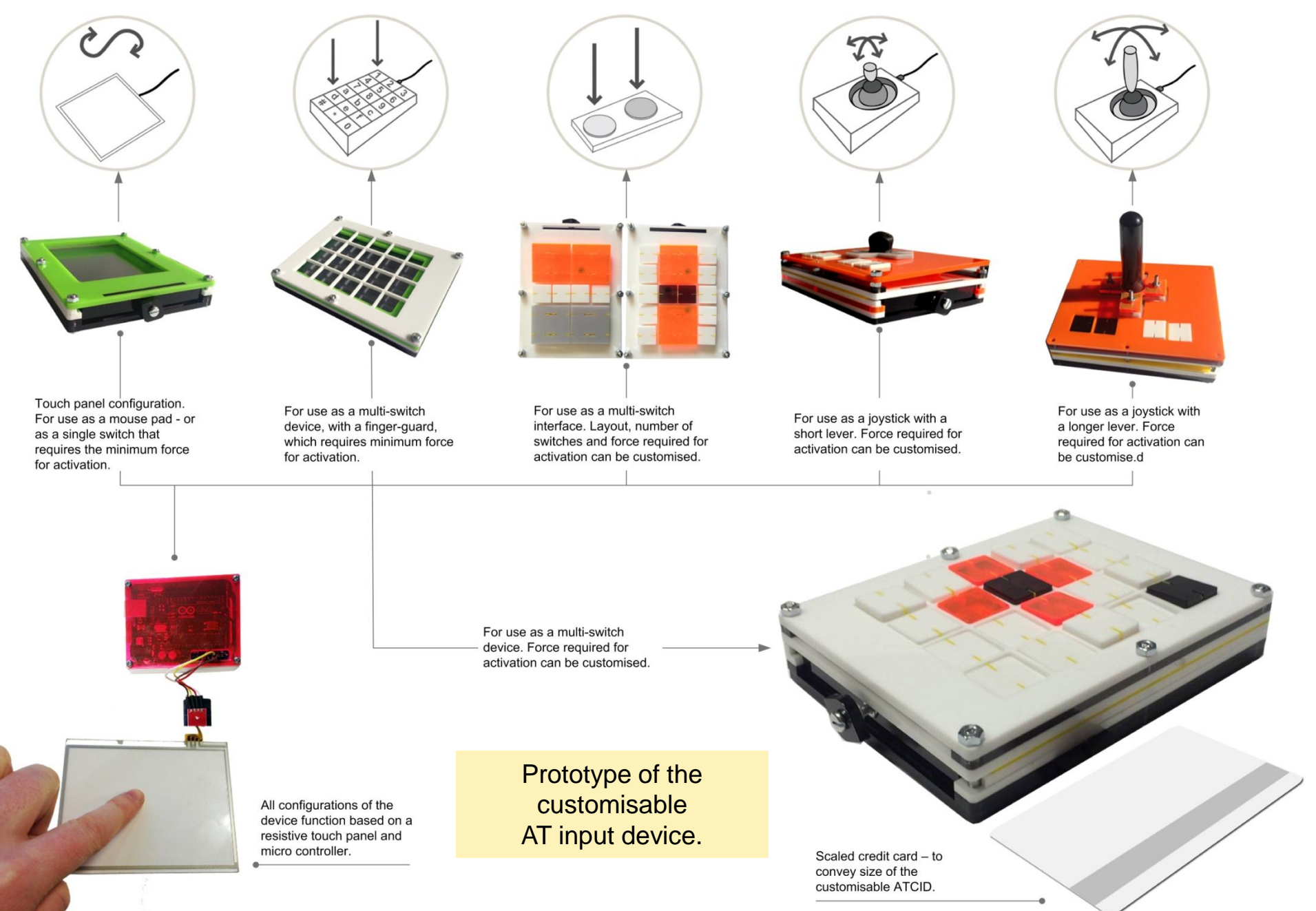
Action on Disability

Enable Ireland

Central Remedial Clinic

Cedar
A better future for people with disabilities

Community Partners



Background

Assistive Technology (AT) is the umbrella term for all products that help people with disabilities to overcome barriers in their environments. Examples are communication devices or wheelchairs. Unfortunately AT can be expensive and products are often abandoned. Poor design is a root cause of these issues, since it can lead to devices that are difficult to use, fail during use, and have poor aesthetics. This research focused on *how to develop customisable AT, with AT users*. Customisable products offer solutions to the problems of both cost and abandonment because a) they can target a larger market, so costs are lower, and b) they can be adapted to a user's changing needs as their disability gets worse or better.

AT Computer Input Devices

The research explored how to design customisable AT through the practical development of a customisable AT computer input device. AT computer input devices are used when a person with a disability can't use a mainstream mouse and keyboard to access a computer. They include switches, joysticks, trackpads, or special assistive keyboards and mice.

Benefits of Participatory Design

Participatory Design workshops were devised to create an omni-directional system of learning, where the researcher learned about the AT users' experiences and ideas, and the AT users learned how to engage in a product design process. A total of 22 people took part in this design research: AT users with motor and communications disabilities, occupational therapists, speech and language therapists, physiotherapists, and AT trainers and technicians. Many thanks to the staff and service users of Enable Ireland, The Central Remedial Clinic and The Cedar Foundation.

Learning Outcomes

Four main outcomes resulted from the surveys and participatory design workshops:

- 1) design criteria for AT computer input devices,
- 2) contributions to participatory design practice involving individuals with motor and communication disabilities,
- 3) revised product design solutions for customisable computer input devices, and
- 4) a product design framework for customisable AT.

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Living Knowledge
The International Science Shop Network



National Development Plan 2007 - 2013



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