

Introducing Innovations: the RERC Case

Changing societal and personal needs call for new and innovated technologies to be developed, designed, produced, and marketed. In our days of the double evolution: demographic and towards an information society, industrial innovation seems to be geared mostly towards the information society, avoiding the demographic evolution. Successful introductions of new, effective, and acceptable products and services into the growing population segment of older people have been mentioned¹, but these are exceptions rather than the rule.

In the USA, Rehabilitation Engineering Research Centers (RERCs) plan and conduct research leading to new scientific knowledge and new or improved methods, procedures, and devices, and help to produce and market these innovations. The authority for RERCs is contained in Section 204(b)(3) of the Rehabilitation Act of 1973, as amended (29 U.S.C. 762(b)(3)). Activities are funded under five-year grants from the National Institute on Disability and Rehabilitation Research (NIDRR), US Department of Education. Product commercialization, the activity of rolling out a new product into the marketplace, is the goal of RERC's technology transfer philosophy².

A Rehabilitation Engineering Research Center (RERC) on Aging exists at the University of Buffalo (New York, USA)³. It not only expands the knowledge base in Assistive Technology for older persons, but also creates new, useful assistive devices for this population. In addition it develops a cadre of service providers, researchers, and device developers to meet personnel needs in this area for today and for the future. Further on, 'RERC on Aging' provides dissemination and technical assistance to all appropriate audiences including older persons with disabilities, their caregivers, service providers, and others.

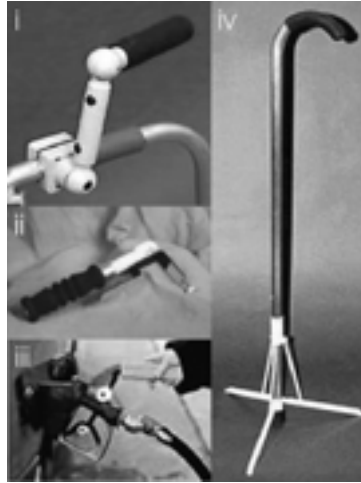


Figure 1: (i) wrist assist; (ii) refrigerator door opener (iii) easy pump (iv) standing cane.

Part of its endeavour is establishing limited and transient production capabilities to demonstrate sufficient market viability to interested companies, while providing some much needed devices to the end users in the interim.

Products developed by the RERC-Aging and currently in different stages of technology transfer, include⁴: (Figure 1):

(i) Wrist Assist or Articulating Positioning Device

Description: A multi-positioning, fully adjustable temporary handle to be used on walkers or other mobility devices to preserve the independence of persons with arthritic and physical limitations. This device received patent #5,964,439 for its uniqueness not only for its application but also for the multi-tube clamp design. *Status:* Seeking license agreement and/or production partner;

(ii) Refrigerator Door Opener

Description: This device is used to assist the separation of the magnetic seal on the door. Its need was expressed by older persons with limited strength and/or arthritis. *Status:* The original prototype is in use by a client and a newer more universal type is in limited production. Once

small production lot completed, marketing will be done through the Center for Assistive Technology (University of Buffalo) and Dynamic Living Inc (Windsor, Connecticut, USA);

(iii) Easy Pump

Description: This device is used on a gas station pump handle to assist in the fuel dispensing operation. Persons served include those with arthritis and gripweakness. *Status:* Small production lot completed. This product can be purchased through Dynamic Living Inc;

(iv) Standing Cane

Description: A cane with retractable legs with free standing capability when no other options for temporary storage are available. Serving those that are unable to recover a fallen cane. *Status:* Prototypes developed and seeking commercial partner.

them are expected to be taken into mass production eventually. This RERC set-up appears to be an effective means to make sure that industry not only fills in the needs of the emerging knowledge based-society, but also the needed changes called for by the demographic evolution.

References

1. Coleman R, Myerson J. Improving Life Quality by Countering Design Exclusion. *Gerontechnology* 2001; 1(2):88-102
2. Stone VI. Evaluating Technology Transfer: A Case Study in Technology for Persons with Disabilities. Annual Meeting of the American Evaluation Association, Washington DC; 2002; http://cosmos.buffalo.edu/t2rerc/dissemination/conferencepapers/fulltext_2002_stone.htm
3. <http://cat.buffalo.edu/rerc-aging/>
4. <http://cat.buffalo.edu/rerc-aging/rerca-device.php>

Annelies (J.E.M.H.) van Bronswijk
e-mail: j.e.m.h.v.Bronswijk@tue.nl

These Assistive Devices have been developed from consumer suggestions. All of