Handwriting Data Acquisition Device

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ABSTRACT:
Collaboration with Bloorview Kids Rehab group to design a device to quantify a client's ability to grasp a writing stylus. The system includes a pen stylus, with force measuring sensor array on the surface, electronic interface and a PC for data acquisition.

BACKGROUND:
The PRISM lab is a multidisciplinary group of individuals concerned with advanced technologies and analytical methods for enabling children and youth with disabilities and special needs, along with their families, to achieve their personal best.
The PRISM lab is located within Bloorview Kids Rehab, an academic health sciences centre, fully affiliated with the University of Toronto, and the largest paediatric rehabilitation centre in Ontario. We are affiliated with the Institute of Biomaterials and Biomedical Engineering, Department of Mechanical and Industrial Engineering, Department of Electrical and Computer Engineering, and the Graduate Department of Rehabilitation Science, all at the University of Toronto.

DESCRIPTION OF RESEARCH:
Design and produce compact electronics to measure and record force measurements at a sampling rate of 20 Hz. GBC effort focused on initial circuit design, layout and production of devices using facilities in GBC Microelectronics Labs. Future study includes producing customized sensors, and integrating RF technology to permit a more natural client experience.

FINDINGS/CONCLUSIONS/APPLICATIONS:
Successfully produced two devices that are currently being used by an occupational therapist at Bloorview for research purposes.

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