

**Electro-ocular Measurement and Control Technique
by Integrating Virtual Instrument**

Yao, Kai-chao; Huang, Wei-tzer

Abstract

In this research, electro-ocular control technique is designed and constructed. The structure of virtual instrument built by software part, LabviewBhardware part, DAQ card and some external circuits is applied in the development process. This research integrates industry needing oriented technology - physiological measurement of medical industry, advanced technology - virtual instrument and medical knowledge - physiology. Practical measurements have been carried out to demonstrate the capabilities of this new measurement technique. Further, the development of this technique can be applied in several control application for sever disability such as wheelchair control and computer mouse control.

Key words: Electro-oculogram; Labview; Measurement;
Virtual instrument