BME464L Project (Fall 2013, Palmeri)

Human Pharmacology Lab Event Trigger

Clinical Problem

The Human Pharmacology Lab (HPL) in the Department of Anesthesiology in the Duke University Medical Center performs complex clinical studies testing pharmacologic responses and the biological response to physiologic stress. Studies in the HPL require continuous, concurrent monitoring of many physiologic systems, including blood pressure, respiratory rate, heart rate, arterial blood gas measurements, and bispectral index measurements. Many of these systems have been integrated into a LabChart® (ADinstruments) environment for data display and recording; however, there are limited means by which a clinician / study staff can record events of interest during a study.

Project Objective

Design a device that allows a clinician / study staff to indicate study events that can be recorded with the LabChart data collection system. These events should have some degree of freedom to be user-defined. The triggering of these events should be possible through a variety of mechanisms (e.g., push button, foot pedal, voice activated, etc.) and must be time synchronized with the LabChart environment.

Clinical Contact

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