Potential Project Descriptions

ECE411 – Practicum Project

**Dwayne: Personal CO2 Alert System**

Those who trek into volcanic areas such as researchers, search and rescue personnel, or even just adventurers may find themselves in an environment where CO­­2 levels are dangerously high. When cooled, CO2 emitted from volcanic activity is denser than air and can accumulate in low-lying topographical features. Carbon dioxide is odorless and colorless, so a warning system could be useful in order to prevent exposure. A personal CO2 sensor, worn on a vest, backpack, or around the neck could provide immediate alerts to excessive CO2 in the air via an audible alert tone and a simple display, such as a bar graph or flashing light.

**Ha: Rain alarm systems**

Plan the day with confidence with your own rain alarm system. One advantage of using your own rain alarm system over regional weather predictions is that data comes right from your backyard. The weather forecast is based on two main related weather variables: temperature and humidity. The data after processed is displayed on an LCD screen. The system is useful for outdoorsy families since it provides information about when it’s going to rain and how heavy.

**Thanh: Useless Lock Box**

People all have something important to keep in secret especially teenage girls. This idea is about making an interesting lock box for these girls to keep some small secret objects. It is initially a regular lock box but it can be added a thing on the top in order to make the lock box more interesting when entering the wrong code. This useless lock box can be small enough to put on a study deck for those girls to relax while studying by creating some funny moments. Parents can give this useless lock box as a great present with the meaning of respect their daughter secret life.

**Daniel: Sequence Controlled Alarm Clock**

Getting up in the morning can be difficult when the snooze button is right at your fingertips. With the sequence controlled alarm clock a quick snooze button isn’t so quick. This project will involve a clock displayed on an LCD screen and an alarm. When the audible alarm sounds the LCD screen will switch to a sequence of button presses. The alarm will not shut off again until that random sequence is pressed. The idea is a simple one but with a very practical use. The programming of the clock would be done with several buttons and a slider switch. The sequence buttons would be simple, with 4 direction arrows.