Project title:
Automated Temperature monitoring system

Engineering discipline(s):
Mechanical Engineering, programming

Required skills, materials and equipment:
Skills: Mechanical design, temperature measurement, programming (cell phone app), possibly wireless.
Materials: temperature monitoring equipment, thermocouple/thermistors.

Background and motivation: What is the current situation and how would this project improve it?
Currently Wegmans has many stand alone in store displays that contain different product that must be kept at a specific temperature. If the temperature drops below a threshold for a certain amount of time, the product may become non-salable. Typically the temperature of a particular station is monitored manually at fixed time intervals, but if the failure of the system is untimely, the manual system will break down.

Objective: What does this project hope to accomplish?
The goal would be to create a real-time, simple, inexpensive temperature monitoring system that could be used by an individual to keep track of a number of locations simultaneously.

Deliverables: What specifically should the project produce in order to be a success?

- Understanding of the current process, and shortcomings,
- Complete set of requirements and specifications for the system
- Identify several design concepts, these should include:
  - Concept for fixing exiting system
  - Concept for replacing existing system
- Decision matrix indicating most promising design alternative
- Design proposal, including associated drawing package, system description
- Prototype of design
- Ideally a working breadboard/engineering model

Recommended team size: 4

Mentors: