Healthnet

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Project

• Concept
  – Give consumers access to their personal physiological data.
  – Wireless network of sensors on the body to process and record EKG, temperature, and location data.

• Motivation
  – Current consumer fitness products only report heart rate and blood pressure data.
  – Devices in the medical industry capable of more detailed reporting are not very portable and often expensive.
  – Our product will allow consumers to record detailed physiological information at their convenience.
Competition
Requirements

• Wireless sensor network of EKG pads, pulse oximeters, and other types of sensors.
• Wirelessly transmit data to a personal computer for analysis and visualization.
• Display heart rate and energy expenditure data.
• Make hardware system convenient and portable.
Technology

• Sensor modules
  – Physical sensor (EKG pad, pulse oximeter), AVR processor, flash memory, XBee transmitter, and battery.
  – Send data wirelessly to sensor server.
  – Developed and provided by members of last year’s HeartSavers project.

• Sensor server
  – Wearable Gumstix ARM board equipped with XBee transmitter, and Bluetooth transmitter.
  – Embedded software manages data from the sensors and interfaces with a personal computer.

• User interface
  – Desktop application for uploading data from the sensor server via Bluetooth.
  – Web interface for viewing and sharing data.