### Title
Bikeputer: Modern Visual Bicycle Computer System (ECE)

### Technical areas
Software, embedded systems, hardware, sensors, electronic circuits, product design, mechanics

### Customer's Project Description
Given the recent rise in the cost of fuel as well as a push towards environmentally friendly transportation methods, the bicycle has had a recent rebirth in the United States. Bike usage in Boston has increased 122% from 2007 to 2009.

Due to the increase in popularity and usage, we feel that the bicycle is becoming a legitimate form of transportation. Because of this, we would like to create a product to cater to the serious bicycle commuter: to give bicycle users the technological benefits and features that modern car drivers have. With this we introduce the Bikeputer: a modern, all-in-one, bicycle monitoring system. For this Bikeputer we would like the following customer features:

**Modern visual bicycle computer system:**
- Full color LCD panel (optionally OLED)
- Touch screen navigation
- Viewable maps
- Bicycle diagnostics
  - Speed
  - Distance traveled
  - Time, Date, Stopwatch
  - Tire pressure monitoring

**Self-powered through pedaling and/or solar**

**Usability:**
- Easy to install onto any existing bike frame (within reason)
- Clean and simple product design
- Small footprint
- Non-obtrusive (and non-distracting) for rider

**Potential additions if time permits:**
- GPS overlay for maps feature

A better name than Bikepreter is also welcomed.

### Deliverables
Bikeputer prototype system, documents

### Customer's Contact Information
<table>
<thead>
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<th>Email</th>
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<tbody>
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### Customer's Supplied Items
A test bicycle for use in designing this product