Accomplishments

• Assembled PCB
  o Attached PAK VII to PCB
  o Wired between socket bank and PAK VII
• Accelerometer
  o Rewired socket bank
  o Tested for proper outputs
• Parts Ordered/Purchased
  o Ordered PAK VII to convert the PWM signal of the accelerometer to a digital output. Communicates with a serial output to the OOPic.
  o Bought a DC Power Adapter so that batteries would not be used during programming.
• Software
  o Coded turn algorithm using gyroscope
  o Coded objects for sensors
    ▪ Encoder
    ▪ Compass
• Testing
  o Ran encoder tests to determine error

Problems / Solutions

• Gyroscope turn algorithm
• Encoder navigation algorithm drifting
• Lack of Arcsin and Arccos functions in OOPic
• PAK VII not working correctly. Output is always high. Company that the chip was purchased from is being contacted so that a replacement can be obtained. As a backup, the accelerometer has an analog mode and that output is currently going to be used until the PAK VII situation is settled.

Goals

• Integrate data
• Accelerometer sensor getting readings and navigation algorithm
• Create/do final demos
• Begin documentation and presentation