

Team 18 – Block Diagram

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PACMAN Rover

- SparkFun Line Following Sensor
 - Unidirectional data (sensor to PIC)
 - 8-bit data, corresponding to sensor eye state
 - I2C Interface
- ChipKit Motor Shield
 - GPIO speed and direction, 4-wire, unidirectional (PIC to shield), digital
 - I2C monitor, unidirectional byte (shield to PIC)
 - Servo motor out, 5-wire, PWM
- WiFly
 - Bidirectional serial asynchronous (UART)
 - Serial framed protocol (SOF, DATA, CHK, EOF)
- TCS34725 Color Sensor
 - Unidirectional Data
 - I2C Interface

GHOST Rover

- Same I/O complement PACMAN Rover, excepting color sensor

RASPBERRY PI

- Wireless Dongle
 - Bidirectional, TCP/IP Wifi access point
- Software
 - Linux OS, Server Routing Software, Statistics and Debugging Monitor, UI, PIXYCam I/O, and AI Engine
- PixyCam
 - Unidirectional I2C
 - Data contains location of sensed objects

LAPTOP

- SSH Client

