

Project Proposal

Park of the Covenant

Why Smart Parking?

- * Frustration with trying to find a spot
- * Time wasting
- * Eats fuel

Our Solution

- * Occupancy sensor network
- * Display system
- * Four main functional groups

Sensing

- * Demonstrated Features
 - * Determines Occupancy
 - * Easy Installation in Existing Lots
- * Technologies
 - * Infrared
 - * RFID
 - * Ultrasonic
 - * Electromagnetic
 - * GPS

Sensing

- * Engineering Content
 - * Finding Appropriate Sensor
 - * Interfacing with Microcontroller

Networking

- * Demonstrated Features

- * Several sensors interfacing with microcontroller
- * Discrete wire installation in existing lots

- * Technologies

- * Microcontroller
- * Network cable

Networking

- * Engineering Content
 - * Finding a way for sensors to communicate with microcontroller with limited number of input pins.

Display

- * Demonstrated Features

- * Interpret data and output to a display, most likely a LED map
- * Upload to database and have available for smart phone app

- * Technologies

- * LCD screen or LED grid
- * Existing smart phone OS
- * Online database

Display

- * Engineering Content
 - * Display would need to be constantly updated
 - * Need method of sending information on the microcontroller to the internet

Questions?