PROJECT PROPOSAL

TITLE: AURAS (Autonomous Ultrasonic Robot for Area Scanning)

GOALS:

- To avoid obstacles
- To capture visuals on its way
- Recognize voice

PLANNING:

The preliminary step is the initialization of the two MSP430s present in our project. The next step is to interface VRM (Voice Recognition Module) with one of the MSP430. The further steps include interfacing of the following components with other MSP430:

- RF transmitter and receiver
- Servo motor and D.C Motors
- Wireless analog camera
- Voice recognition module
- Ultrasonic sensor

HARDWARE AND INTERFACING:

- MSP-EXP430G2 Launchpad
- Ultrasonic sensors are interfaced and will be used for obstacle detection.
- Servomotor will be interfaced for rotating camera.
- D.C motors for steering purpose.
- Camera for surveillance purpose.
- H-bridge IC L293D will be used for driving DC motors.

MSP430 ON CHIP MODULES TO BE USED:

- Timers
- Digital I/O
- UART
**BLOCK DIAGRAM:**

1. **VOICE RECOGNITION MODULE**
2. **MSP 430 #1**
   - LEDs
   - ENCODER
   - RF TRANSMITTER
   - BUTTON INPUT
3. **WIRELESS ANALOG CAMERA**
   - TRANSMITTER
4. **MOTOR#1**
   - H-BRIDGE
   - MSP 430 #2
   - MOTOR#2
   - MOTOR#3
   - MOTOR#4
   - H-BRIDGE
5. **SERVO MOTOR**
6. **ULTRA SONIC SENSOR**
7. **RF RECEIVER**
8. **DECODER**
9. **RECEIVER**
10. **LAPTOP**