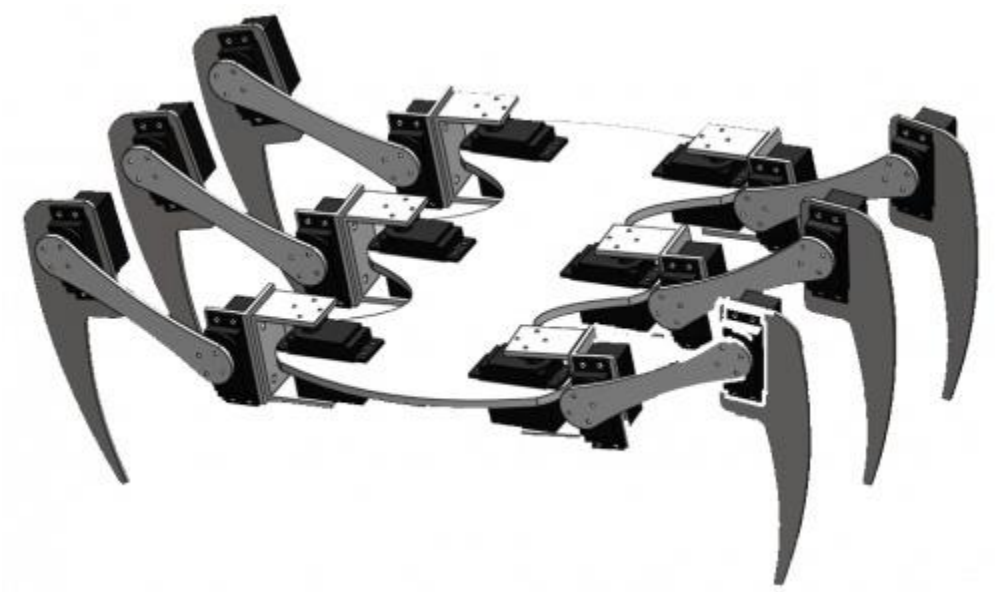
Introduction

What is a Hexapod?

The Hexapod is an insect inspired robot which has six legs that enables it to move flexibly on various terrains. The main advantage of this type of robot is its stability. Unlike bipedal robots, this robots is statically stable; therefore they don't have to depend on balance mechanisms. Although it needs feedback and positive reaction to acquire smoother walk. This type of robot can be used for many application in real life, such as search and rescue application, environment exploration, and also as a CNC machine.



Objective

Our main aim is to make a bot which can traverse different terrains with ease.Three degrees of freedom in the legs allows for more maneuverability and wider degree of motions.Also to this platform is to be used for further educational purposes and research.

Parts Required

- 18 Servos
- AVR USB Programmer
- 12V Lithium ion rechargeable Battery
- Battery Charger

- Bread board
- 10 pin to 6 pin programming adaptor
- 24 IC 7806 -
- Capacitor
- Resistor
- 2 Heat Sink
- Switch
- Pots,leds etc
- Nuts and Bolts
- Acrylic
- Bondite
- PCB
- Atmega 32
- Atmega 8
- Ic Holderes,Buck strips etc.

Plan Of Action

Week 1 (May 5th -11th)

- This week we planned to
    - Learn about servos
    - Decide which servo to choose
    - Research about the microcontroller/servo controller.
    - Research and decide on the battery
    - Learn Solidworks and eagle

Week 2 (May 12th- 18th)

- This week we planned to
    - Make rough protoype
    - Make solidworks models of parts
    - Buy the parts required
    - Design PCB

Week 3 (May 19th - 25th)

- Get parts cut
- Give PCB for printing
- Study Gaits for walking

Week 4 (May 26th - June 1)

- Do electrical and mechanical debugging
- Writing the code

Week 5 (June 2nd - June 8th)

- Assembling the parts together .

Week 6 (June 9th - June 15th)

- Finishing touches.