

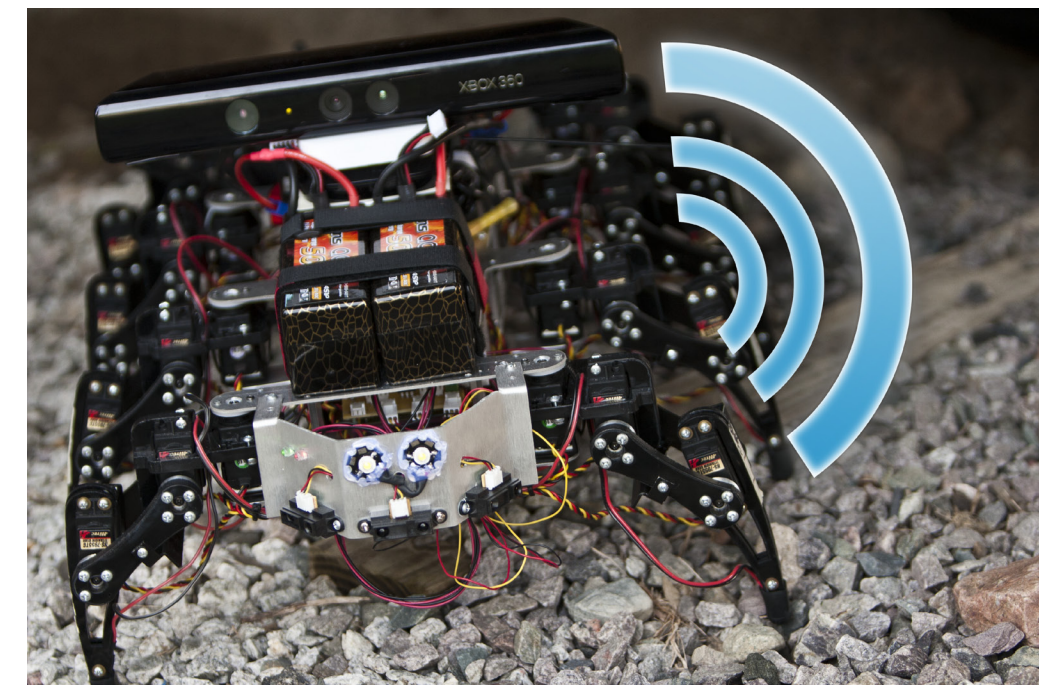


# PARIETAL SYSTEMS

A tele-operated biomimetic robot

## Problem Statement

During the 2010-2011 year of the project, the PSI SCOPE team focused on hardware development for the robotic platform.



This year, the team focused on the design and development of workstation software to allow higher level planning and complex decision making, and to provide an enhanced user interface. The workstation provides for direct control and supervision of the robot by a remote user, as well as support for computationally complex algorithms.

## Workstation Interface

To interface with the robot the workstation is equipped with 3D video glasses and an Xbox controller. The 3D glasses allow the user to experience the robot's perspective in an immersive manner, while the Xbox controller allows eyes-free operation and control of the robot.

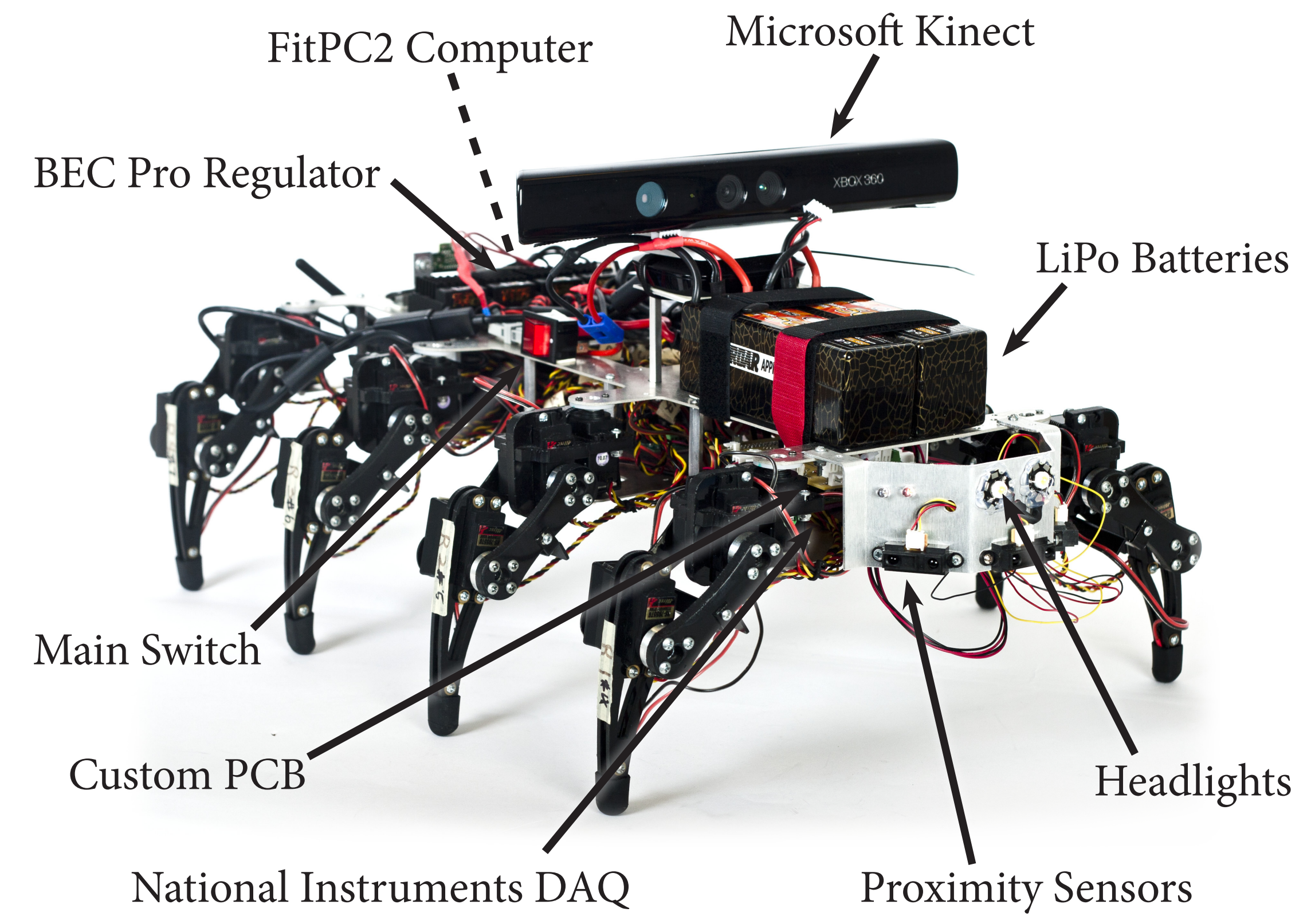


An example of the workstation user interface in anaglyph 3D. Use attached 3D glasses to view.



## Robot Platform

The physical robot chassis was constructed last year by the 2010-2011 Olin PSI SCOPE Team. This year the electrical, sensor, and communications subsystems were upgraded. These upgrades facilitated improved functionality and enhanced reliability.



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