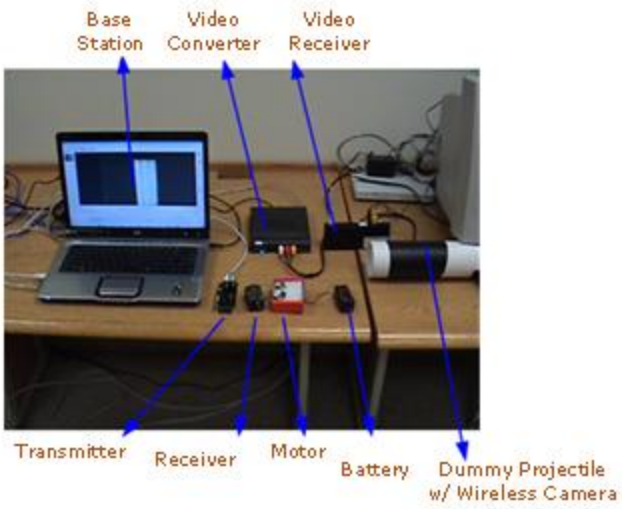
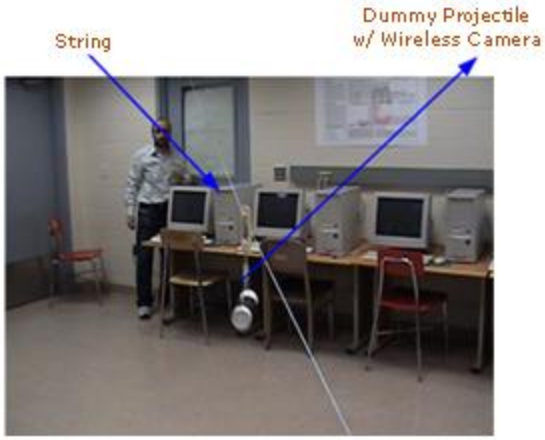
**Drs. Sobh, Elleithy, and Lee tested a prototype of transformable Unmanned Aerial Vehicle (UAV) Design funded project in spring and summer 2009**

Drs. Sobh, Elleithy, and Lee tested a prototype of the transformable Unmanned Aerial Vehicle (UAV) Design, a project funded in the spring and summer of 2009.

The project was awarded close to $60,000 by the U.S. Army Armament, Research, Development & Engineering Center (ARDEC). to develop a prototype for a transformable Unmanned Aerial Vehicle (UAV) The project included a number of tasks:




- Task 1: Investigation of wireless transmitters and receivers; investigate wireless components, transmitter, receiver, and antenna.
- Task 2: System implementation; design and integrate wireless components with UAV Control.
- Task 3: Wireless camera component; install the video camera on the UAV and display on a PC.
- Task 4: Demonstrations; demonstrate the wireless link and camera components of the transformable UAV system.




The test of the prototype was performed in the School of Engineering s Mobile and Wireless Communications Laboratory as well as in Bridgeport s Seaside Park.

The picture shows the prototype and an experimentation carried by Ph.D. student Ali Alrashedi. According to Ali, “Working on such a high tech funded project has provided me a priceless opportunity where I had to design the control circuitry of the motors of the UAV.” The picture shows Ali, working with a dummy projectile that was hanging on a string, to capture a video using a wireless camera mounted inside the tube. The video signal is sent to a base station, using a transmitter integrated with a camera. In the base station, a video receiver acquires the wireless video signal, and then sends the signal to a PC via a video converter. In the base station (PC), the software for the video component displays the captured video, and processes it to generate a control signal. Finally, the generated control signal is transmitted from the transmitter to a receiver, using the wireless link component.

According to Dr. Elleithy, “The successful implementation of the prototype helped the University of Bridgeport, University of Hartford, UConn, and other Connecticut industries to receive a $2.4 million grant to finish the detailed designed of this project.”