**Objective:** Develop path planning techniques for UAVs that can be implemented in real-time on simple computational hardware.

**Principle Investigators:** Randy Beard, Tim McLain


**Funding Source:** AFOSR, AFRL/MN.

**Approach**

Developed path planning algorithms that use both the Voronoi algorithm and the Rapidly Exploring Random Tree (RRT) algorithm.

**Problem Summary**

Given the current position of the UAV, a desired goal configuration, and a terrain map, plan a feasible path through the terrain.

Hierarchical decomposition of the problem into waypoint path planning and dynamic path following.

**Results**

First successful flight test in 2005.

Successful flight through rural canyon in central Utah.

Successful flight through simulated urban terrain.