# Project Schedule Overview

8-10 hours per week starting June 2nd, 2008. 2 hours per day at a UAA lab. 2-4 hours per week at home. Preferably with 1-2 hours per week of working time with a field sampler or biologist.

40+ hours the week of June 14th when I am on annual leave from UAA ITS.

160 remaining grant hours could be completed by October, 2008.

# Current Mhs Deficiencies

* The top level application is disorganized compared to the model, polhemus driver, and directx rendering components. It needs to be broken out into different files and decoupled from the MVC controller.
* Tree view indexing is weak, the data structure for species vs. plant lists needs to change
* UI for “wizarding” is not user friendly, needs to use a state machine model to make it more “next next finish”
* The aerial view of the waypoint is unnecessary because the position of the plants is not as important as the spatial distance. Meaning the magnitudes are more important than directions.
* There are not bio statistics calculated. Needs some basic counts and averages at minimum.
* XML serialization and saving files is buggy
* There is no way to interrupt wizarding
* Audio feedback is course

# Mhs New Requirement Notes

* Clean wizard walk through interface based on MS WF and the StateMachineWorkflowActivity class
* Audio feedback for wizard steps & spatial orientation
* Measurement of taller-than-human patches using trigonometry tricks & disto
* Plant sampling cylinder needs to support variable height & diameter
* Disto integration for distance inputs
* GPS integration (not mapping, just recording coordinates)?
* Random GPS points and a shortest path walk of those points?

# Sampling a plant

1. Add a new plant of species
2. Measure the distance from the waypoint to the rooted stem with disto (or maybe gps)
3. Select and measure the long axis length with disto
4. Measure the short axis length (perpendicular to long axis) with the disto
5. Measure the height of the plant either directly or using Pythagorean+disto
6. Place the polhemus at a randomly selected point on the long axis
7. Rotate the polhemus such that the vector (1,1,0) faces the center of the ellipse (always points inward)
8. Sample 3 points per 1 meter stratum
   1. Anchor to the random 3d point in this stratum
   2. Find the nearest CAG and sample its base position, tip position, and base diameter

# Questions

1. How many plants of a species per waypoint?
2. What UI input still has to be done by hand? Can’t be done by device?
3. Can I move the subversion repo & wordpress blog to a math.uaa system?
4. Is ink/tablet integration used? Needed?
5. Which would be better for a person in the field? Checking a list of species and then sampling them. Or adding a new plant and selecting its species from a drop down?