2 Feb, 2012

1. **Polars, Sailboat Model, etc.**
   * 1. **I reviewed the basic model (without land or environment interaction) with Art Allen. I sent the list of parameters, he modified them, and I modified that. The parameters allow for very slow sailors and this, together with the potential for low winds and high currents, exposed some nasty bug/unforeseen consequence. Namely, it is possible, especially with thousands of particles and many different cases, to have a situation where the particle cannot made progress towards his target. This was causing an infinite loop with the particle simply going farther and farther away. Regardless of future enhancements that make this impossible, I needed to put code in that recognized this situation and did something with it. Now, a port or starboard tack that results in a direction that is more than 90 degrees from the desired heading is simply declared “not viable.” If neither tack is viable, “motoring” is used. The parameters for “motoring” are the same as SAROPS’ legs’ minSpeed, cruisingSpeed, and maxSpeed. Motoring also occurs if the wind speeds are too low or too high. This is subject to change.**
2. **Lateral Range Curve, etc.**
   * 1. **I discussed this with Art, Jack, and Guy. The plan is to pass the parameters for the radar LRC to me and have me compute the sweep width and “pass it back to Guy” via the SimWebService mechanism that is already set up. I’ll be using the LRC as before, banking on the notion that for these flights, the legs will be quite long. LRC’s data are assuming infinite legs.**
3. **Travel completed:**
   1. **None**
4. **Upcoming activities scheduled:**
   1. **Finish the basic model. Review the sweep width computation. First crack at the LRC parameterization, reading it, and passing back the sweep width.**
5. **Travel planned:**
   1. **None**
6. **Hours Charged:**
   1. **Kratzke: 52 hours**