



Application Note 102:

Kestrel Software-in-the-Loop Simulation using Aviones Simulator

Summary

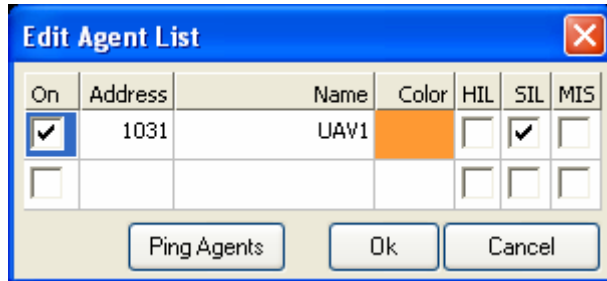
A Windows PC (XP or Vista) is capable of simulating the Kestrel Autopilot functionality using a DLL that can be loaded within the open source simulator called Aviones. This document provides high level instructions on how to start simulation in this mode.

Conducting Simulation

First make sure that you have the necessary autopilot DLLs for use in Aviones. If you look in the directory where you have put Aviones you should see autopilot_sil.dll. If you do not see this file please download it from the Procerus customer website.

Example Simulation:

After you have this file in place launch Aviones. Next start Virtual Cockpit. In Virtual Cockpit click edit agents and enter the agents you would like. Check the box marked SIL which indicates that you plan to do SIL simulation using Aviones.

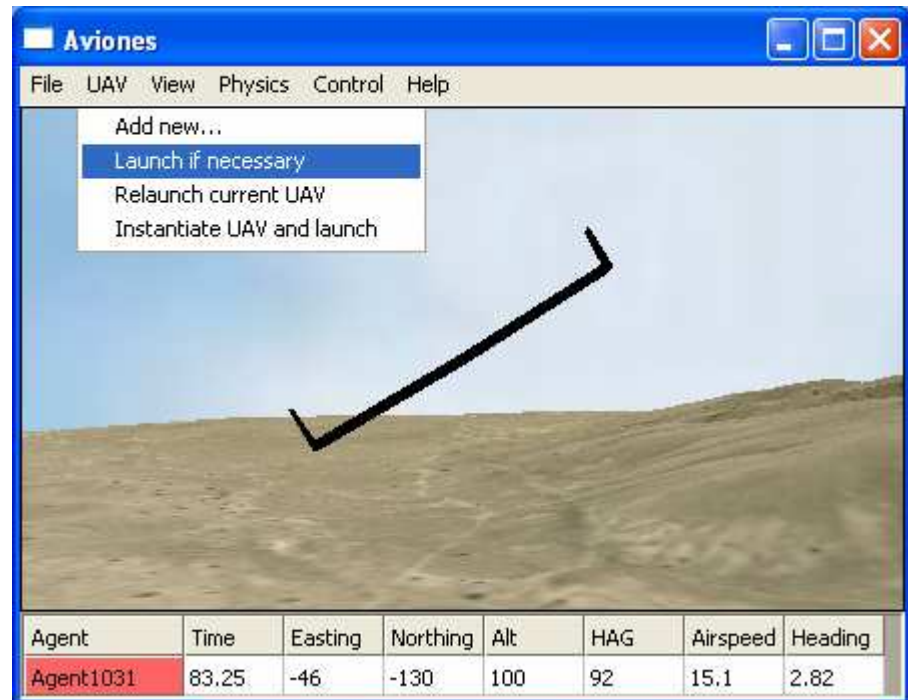


Now press Ok. A dialog will ask you for the IP address of Aviones- select loopback. You should see an agent appear in Aviones. At this point you should be able to have communication with the agent, however the agent is not yet flying.

At this point you should wait for home to be acquired, upload waypoints, put the aircraft in takeoff mode and generally do whatever else to set up for your flight.

To start flying switch to the Aviones application and from the UAV menu select: Launch if necessary

You should now be flying!



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