

Requirements and Instructions for Running the UAV Sense and Avoid Demonstration.

Software Requirements

Player version 3.0.1

Stage version 3.2.2

C++ Boost libraries <http://www.boost.org/>

This demonstration was built on OS X however it should run on linux as well. Minor changes may have to be made.

Make Instructions

Use the command “make all” in the source directory to compile the UAV control code and the scenario generator code.

Use the command “make uav” to just compile the UAV control code.

Use the command “make gen” to compile the scenario generator code.

Append “clean” to the commands, i.e. “make all clean”, to remove .o files after compilation.

Running Instructions

To generate a the .world file, .config file and main.cc file for a scenario:

1. Run the “gen” executable with the first command line argument as the directory of the scenario xml files i.e. “./gen ../scenarios/”.
2. If you already know which scenario you wish to generate you can enter the number of the file as the second command line argument i.e. “./gen ../scenarios/ 2”.

To run the Player/Stage simulation:

1. Start the player server and stage simulation using the “player” terminal command with the first argument being the location of the “gen_config.config” file. The generator automatically creates this one directory above the source code directory. For example “player gen_config.config”.
2. In the source code directory, compile the UAV control code using “make uav” or “make uav clean”.
3. Run the uav executable by using the command “./uav”.

To enable the trails displaying where the displayed objects have been, press “CTRL + F” in the Player window. This can also be enabled as “Trails -> Fast” from the menu.