Chapter 2. Design Project

The objective of this assignment is to create a 3-D graphic of a MAV that is correctly rotated and translated to the desired configuration. Creating animations in Simulink is described in appendix C and example files are given in the ‘animation example’ folder.

2.1 Read appendix C and study carefully the spacecraft animation using vertices and faces given at the textbook.

2.2 Create an animation drawing of the aircraft shown in figure 2.14. (You could create your own drawing of the UAV configuration additionally.)

2.3 Using a Simulink model like the one given, verify that the aircraft is correctly rotated and translated in the animation.

2.4 In the matlab m file, switch the order of rotation and then rotate, and observe the effect in the animation.

Tip

* Before you run the code, check the location of the folder in the Matlab.
* The number of vertices for the face construction should be equal.
* After you write the code in 'drawAircraft.m' file, run the 'mavsim_chap2.slx' file to check the result.