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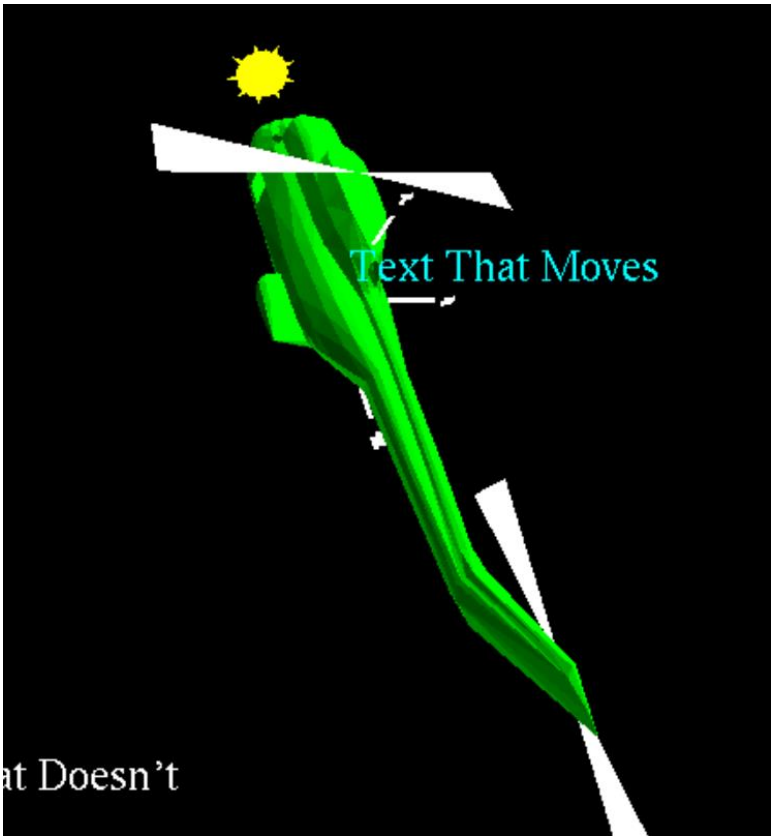
Project #2

Animate a Helicopter!

Aim to the sun!

#1 Correctly draw the helicopter body



#2 Correctly scale the blades

#3 Correctly position the blades

```
    glMatrixMode(GL_MODELVIEW);
    glLoadIdentity();

    // set the eye position, look-at position, and up-vector:
    if (WhichView == 0)
        gluLookAt(0., 0., 3., 0., 0., 0., 0., 1., 0.);
    else if (WhichView == 1)
        gluLookAt(-0.4, 1.8, -4.9, -0.4, 1.8, -10., 0., 1., 0.);


    // rotate the scene:
```

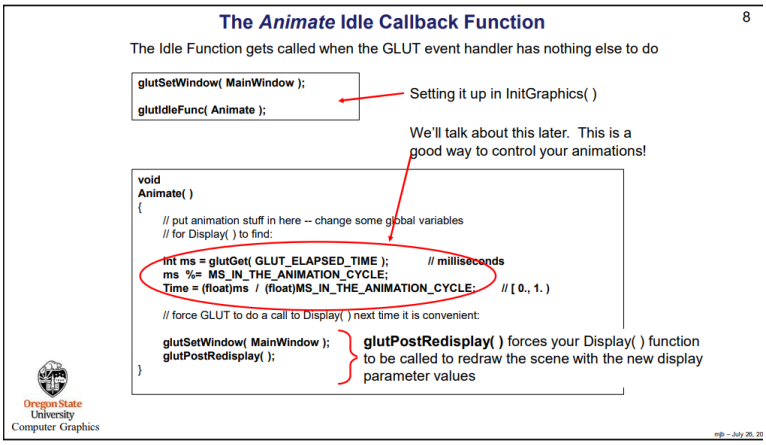
```
#define BLADE_RADIUS        5.0
#define BLADE_WIDTH       1.5

// draw the helicopter blade with radius BLADE_RADIUS and
//  width BLADE_WIDTH centered at (0.,0.,0.) in the XY plane

    glColor3f(1., 1., 1.);
    glBegin(GL_TRIANGLES);
    glVertex3f(BLADE_RADIUS, 2.9, (BLADE_WIDTH / 2. - 2.));
    glVertex3f(0., 2.9, -2.);
    glVertex3f(BLADE_RADIUS, 2.9, (-BLADE_WIDTH / 2. - 2.));

    glVertex3f(-BLADE_RADIUS, 2.9, (-BLADE_WIDTH / 2. - 2.));
    glVertex3f(0., 2.9, -2.);
    glVertex3f(-BLADE_RADIUS, 2.9, (BLADE_WIDTH / 2. - 2.));
    glEnd();


    // rear blades:

#define BLADE_RADIUS_R      3.0
#define BLADE_WIDTH_R        1.0

// draw the helicopter blade with radius BLADE_RADIUS and
//  width BLADE_WIDTH centered at (0.,0.,0.) in the XY plane

    glColor3f(1., 1., 1.);
    glBegin(GL_TRIANGLES);
    glVertex3f(.5, BLADE_WIDTH_R / 2. + 2.5, 9. + BLADE_RADIUS_R);
    glVertex3f(.5, 2.5, 9.);
    glVertex3f(.5, -BLADE_WIDTH_R / 2. + 2.5, 9. + BLADE_RADIUS_R);

    glVertex3f(.5, -BLADE_WIDTH_R / 2. + 2.5, 9. - BLADE_RADIUS_R);
    glVertex3f(.5, 2.5, 9.);
    glVertex3f(.5, BLADE_WIDTH_R / 2. + 2.5, 9. - BLADE_RADIUS_R);
    glEnd();
```

#4 Correctly rotate the blades

I don’t remember how to do that, I only find this slide about the Animate().

When I google it, I couldn’t find a good example for it. Although I had tried some methods, like change the coordinates of xs’,ys’ and zs’ with the Time under for loops. But I failed.

So, I haven’t competed this mission.



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#5 Recognizable Inside View

Unable to use Xrot, Yrot, and Scale in the Inside View

[Kaltura Capture recording - October 14th 2021, 11:37:05 pm - OSU MediaSpace (oregonstate.edu)]