

DEPARTMENT OF MECHANICAL AND INDUSTRIAL ENGINEERING
NORTHEASTERN UNIVERSITY

CAPSULE PROGRAM
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Tutorial on PutPut Boat
Understanding 3D Space and Photo Rendering

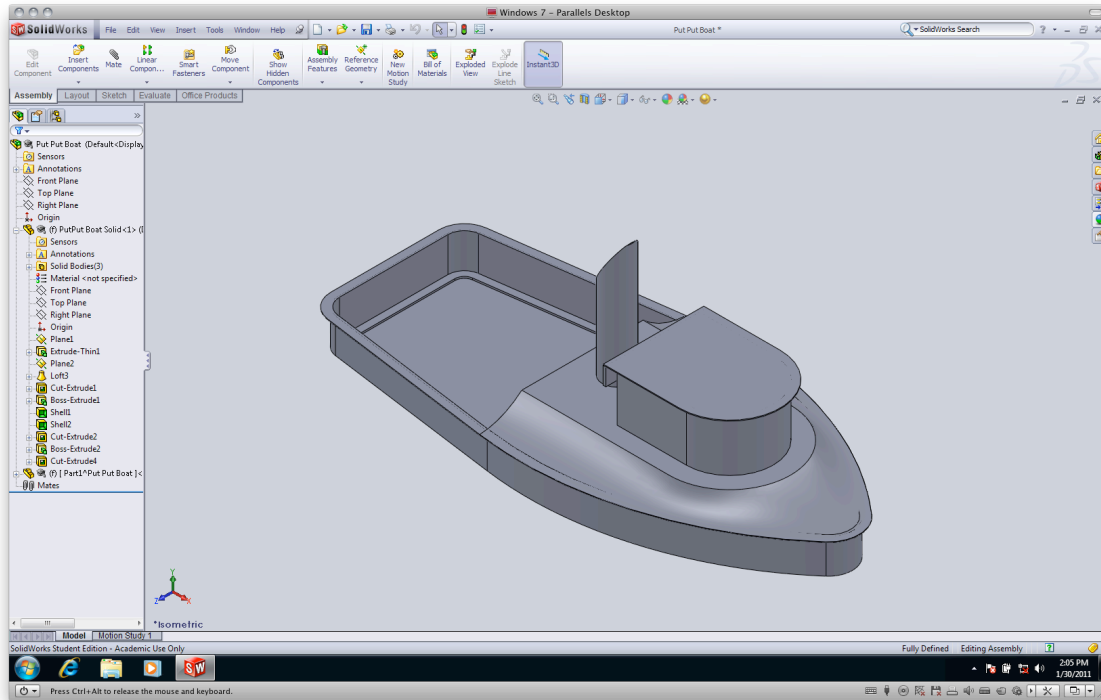
SolidWorks 2010
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3D Modeling and Space

In this tutorial you will get use to seeing an object from different views.

Step 1

Open the file **Put Put Boat** provided to you by your teacher:

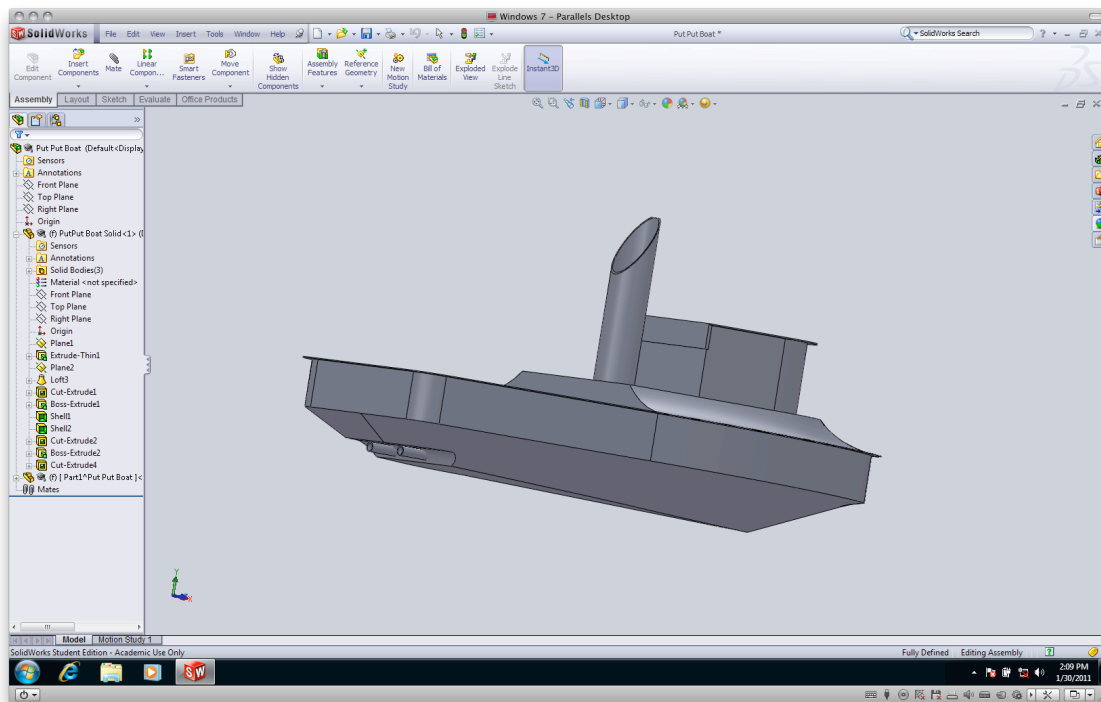
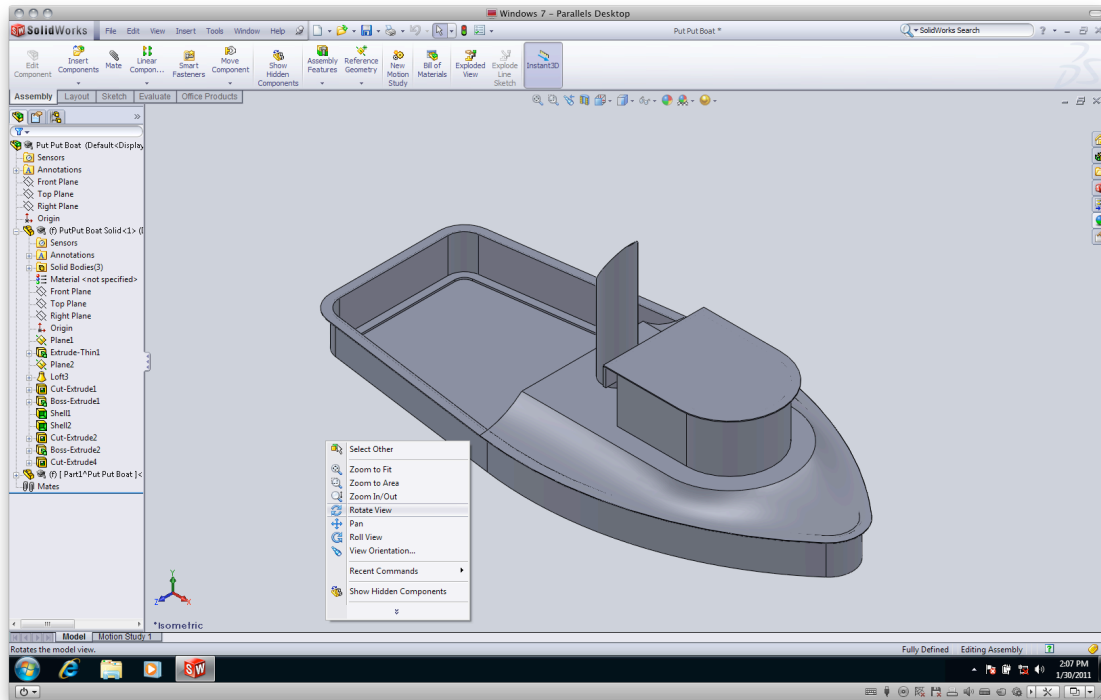


This is called an **Assembly** in Solidworks. An assembly is a combination of parts put into one file. You will learn more about later.

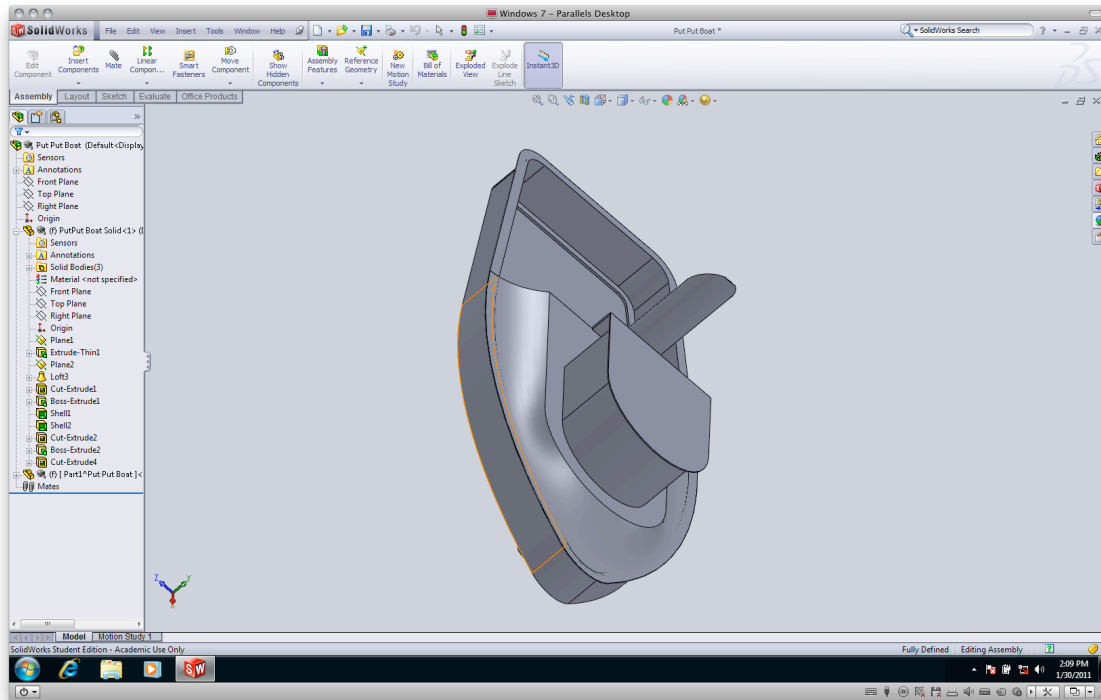
Step 2

Rotate the boat so you can view it in 3D space. The purpose of this is to get you to understand the 3D modeling space.

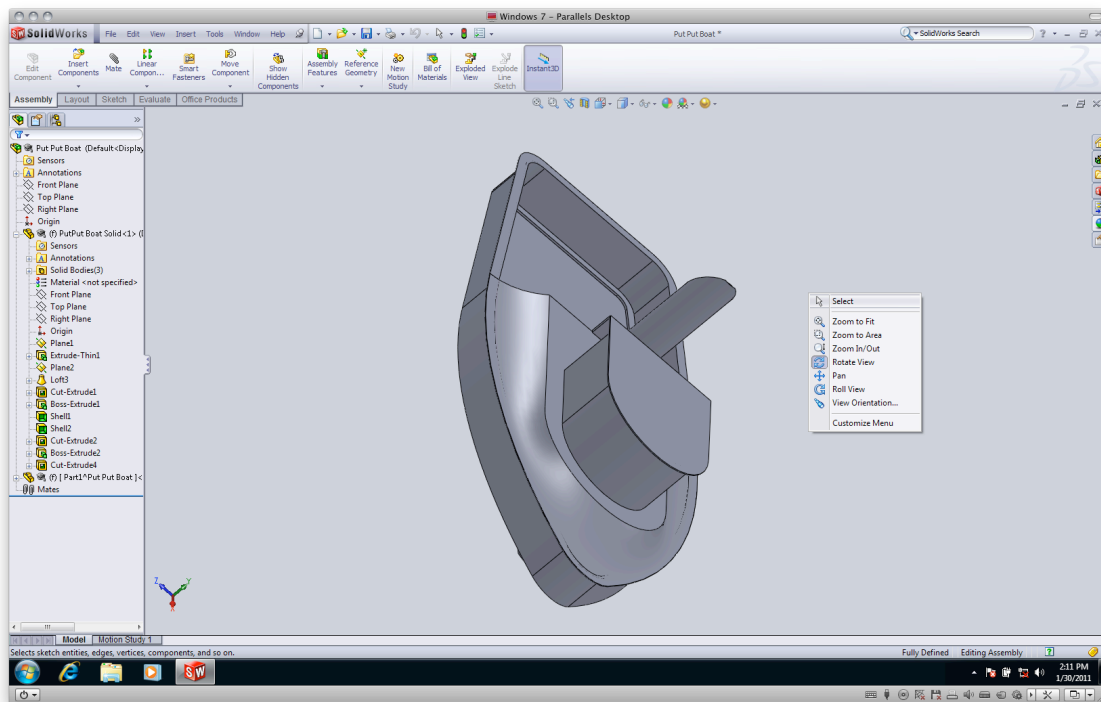
Right Click in any of the background area → Left click **Rotate View ...** Your mouse cursor will turn into two blue circular arrows.



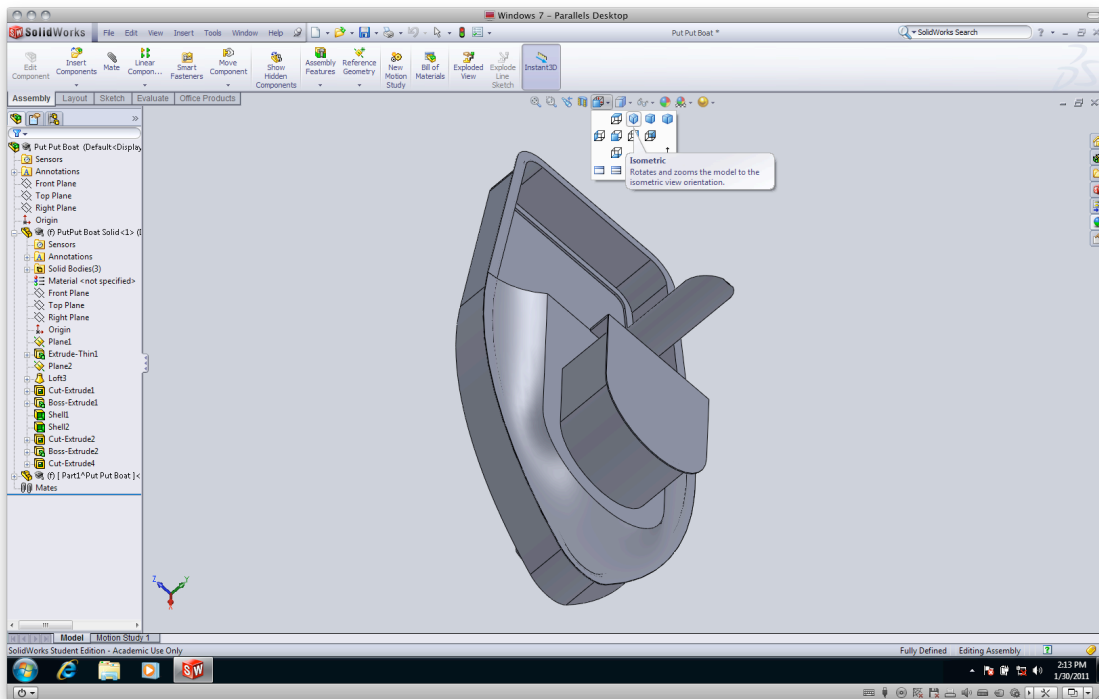
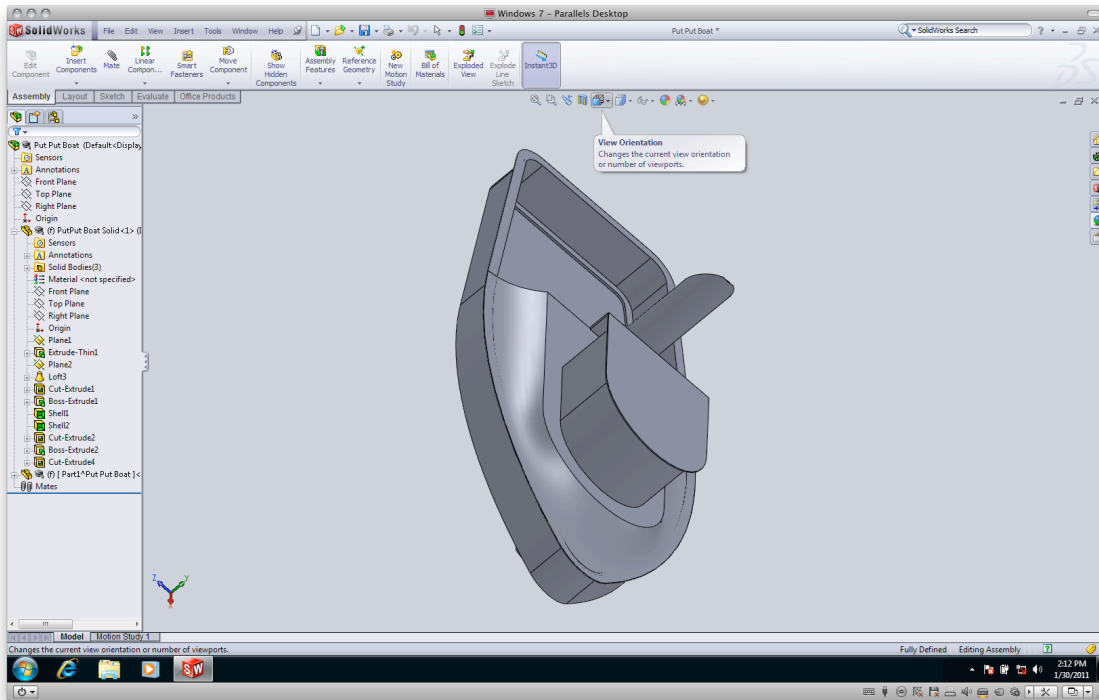
Hold and left click the mouse and move the cursor in any direction. Do you see your model move? You can release the left click at any time and rotate the model at different angles.



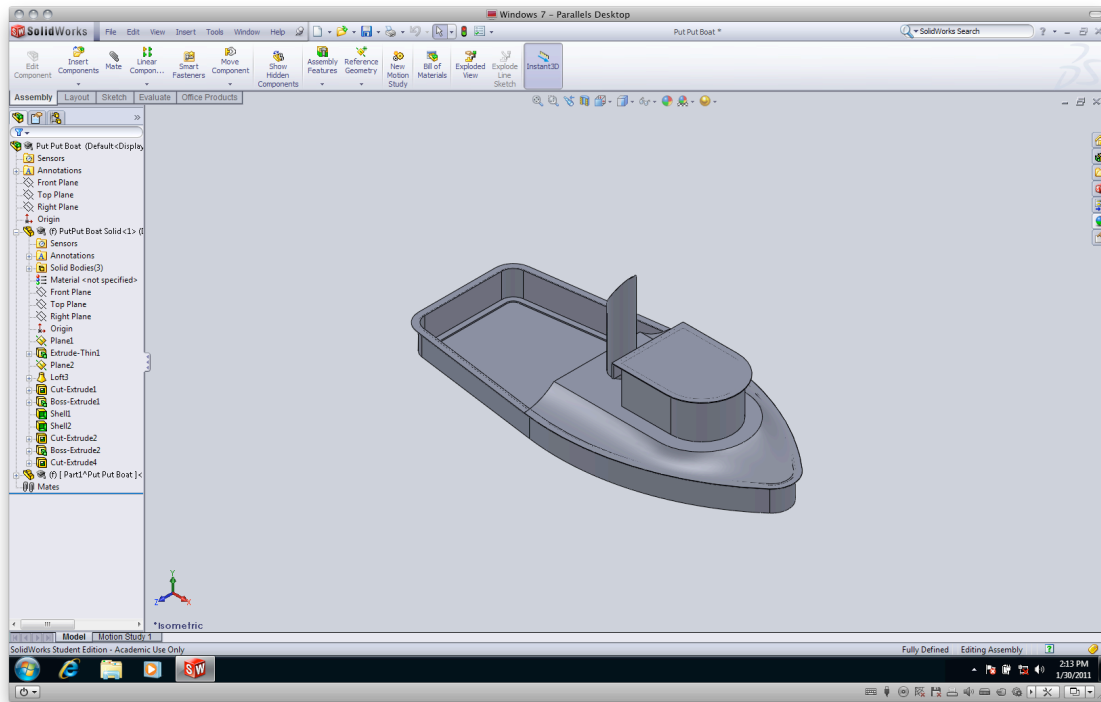
To exit rotation, **right click** anywhere in the background and click the **Select** option.



To return back to the default view, select the **View Orientation** box on the top of your screen and select **Isometric**.



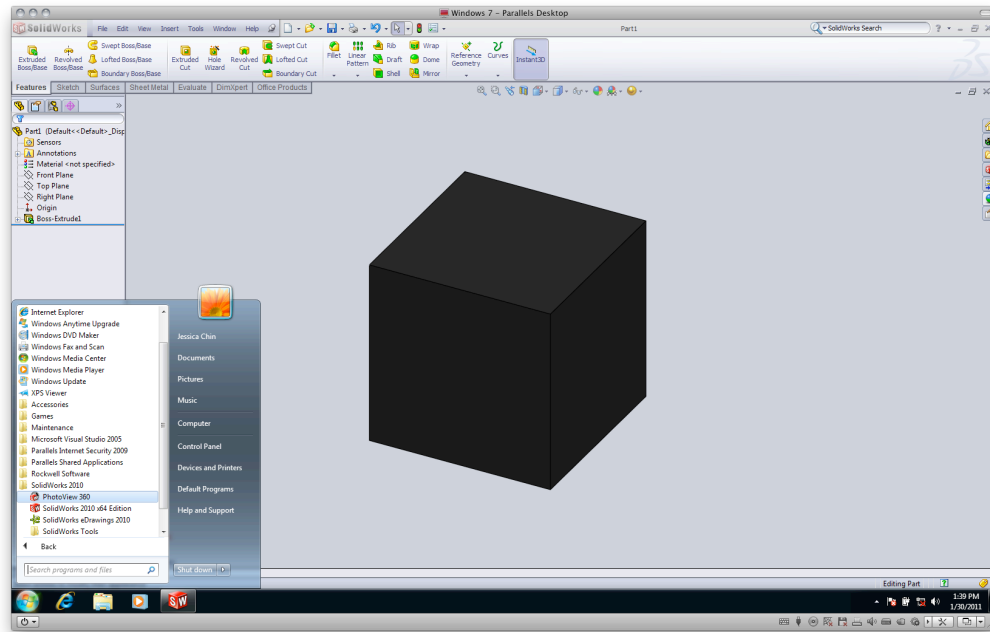
Your Put Put boat should look like this:



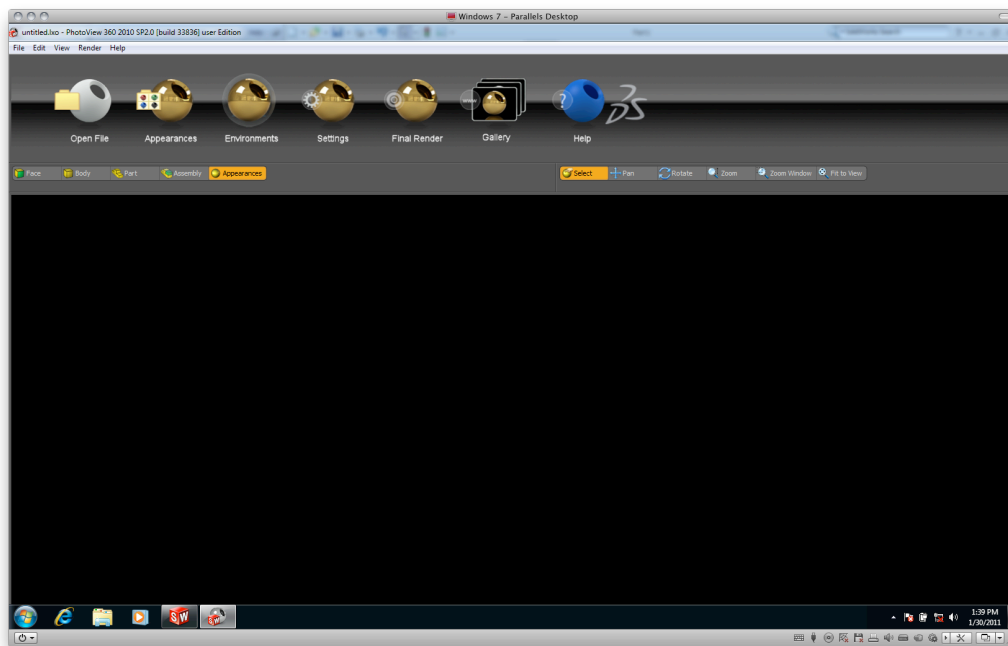
Step 3

To show you the power of Solidworks, we are going to make the boat look like a photo. Photo rendering is what occurs to make a model designed in a computer program look like it's actually real. This allows viewers to see and imagine what it would look like:

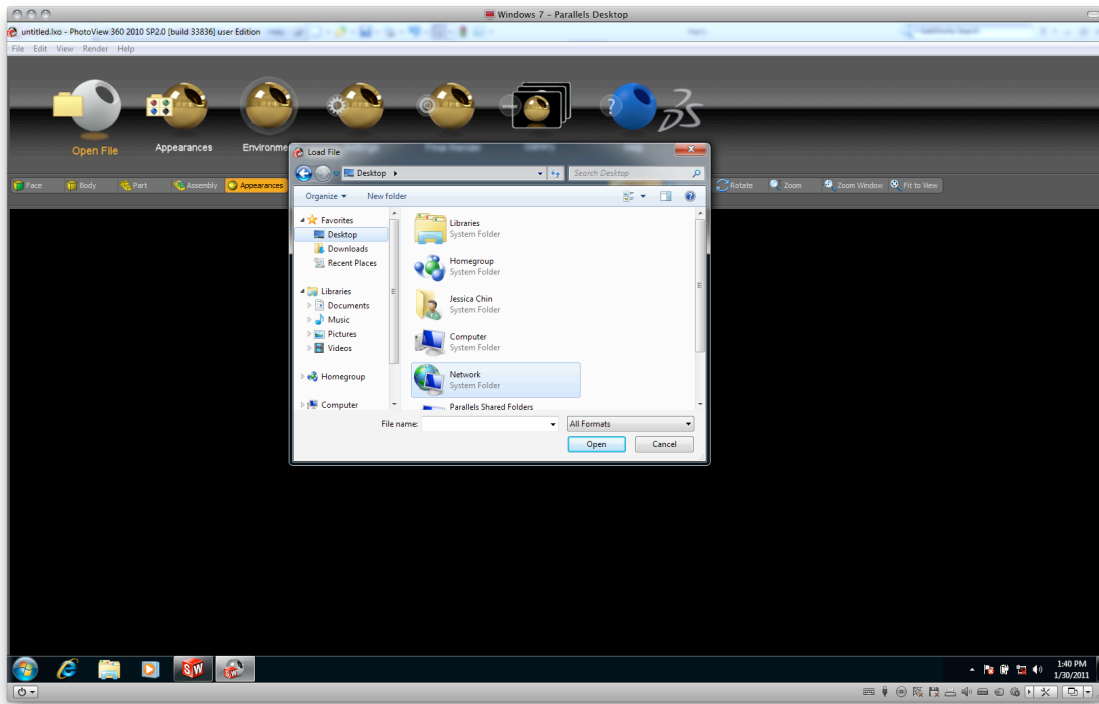
Go to the Start menu → All Programs → Solidworks 2010 → Photoview 360



This will be your opening screen.

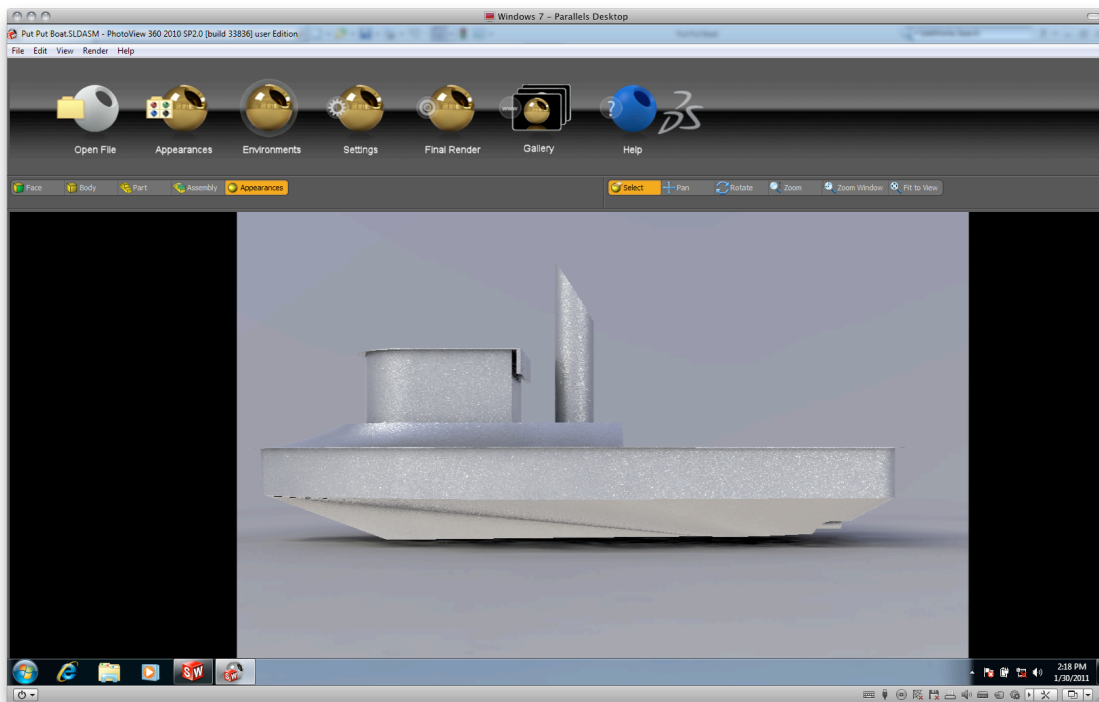


Locate and open your file in the upper left hand corner.

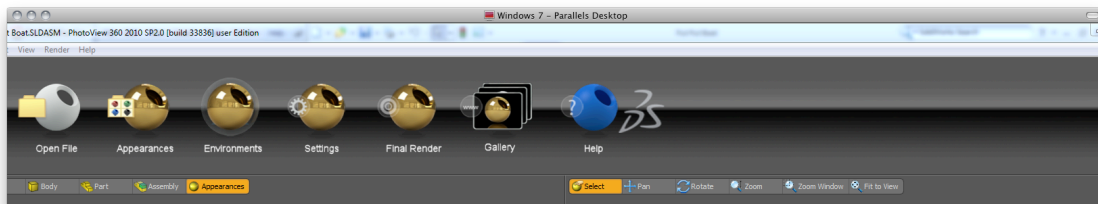
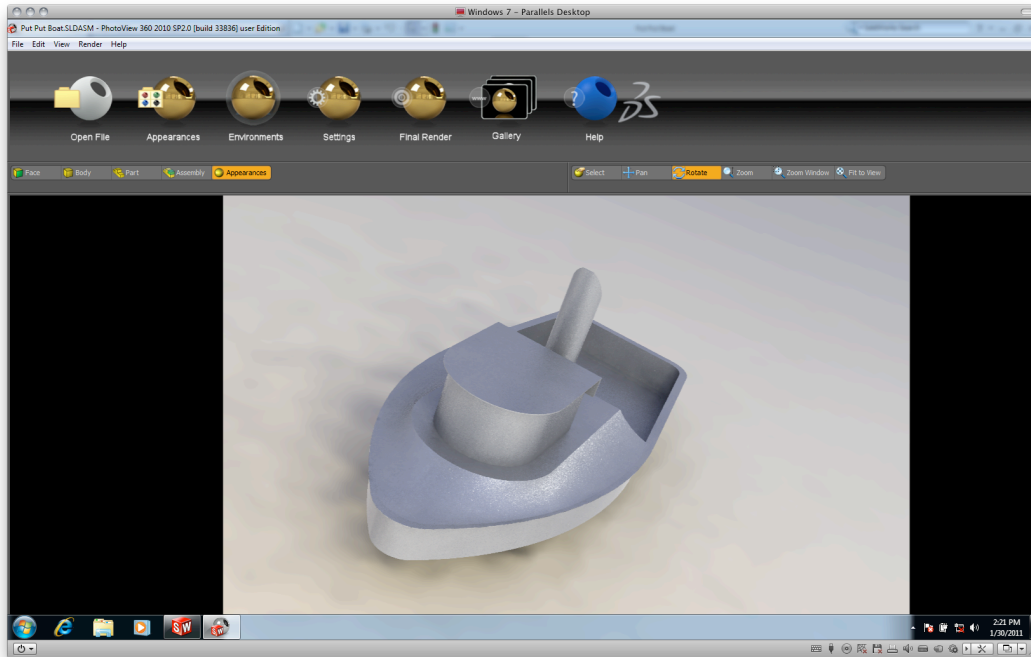


You will see your block appear in the window. In this window, you can use the commands **Pan**, **Rotate**, **Zoom** to see different angles of your boat.

After you open the **Put Put Boat** file, your screen should look like this:

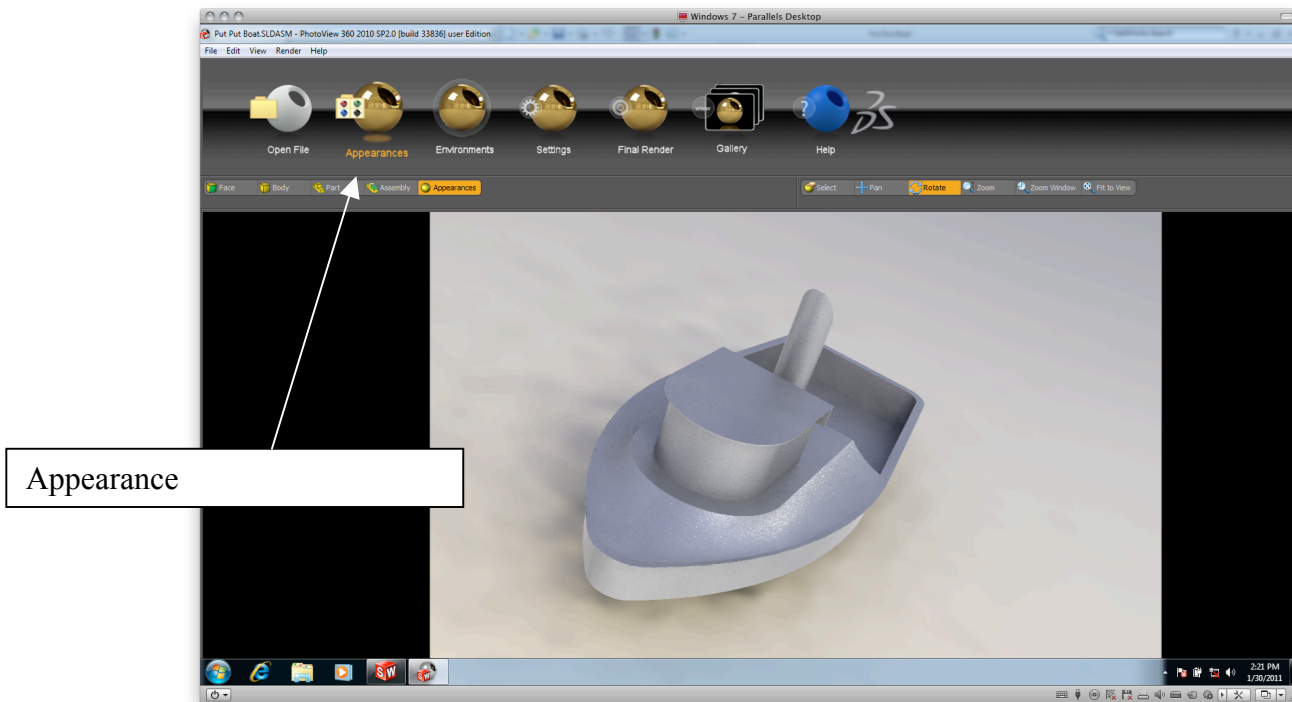


The side view doesn't give us much information, so I'd like to see it from a different view. To do this, rotate your model to look something like this – it doesn't have to look exactly like this but just to get a better view. When you get a view you like, click the **Select** button back.

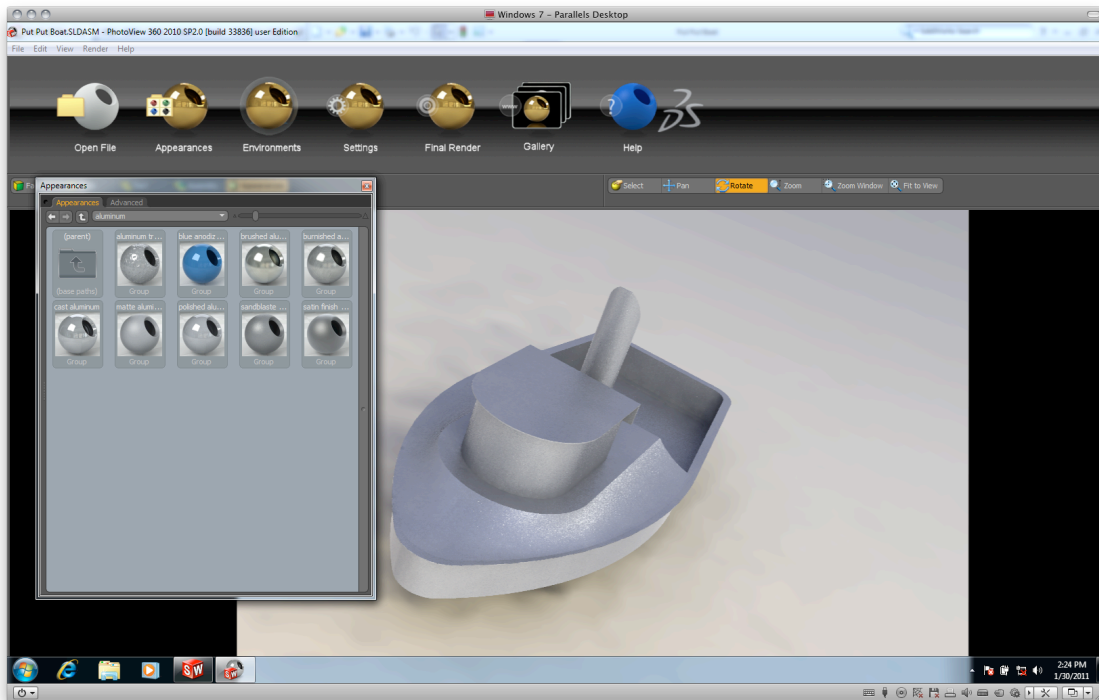


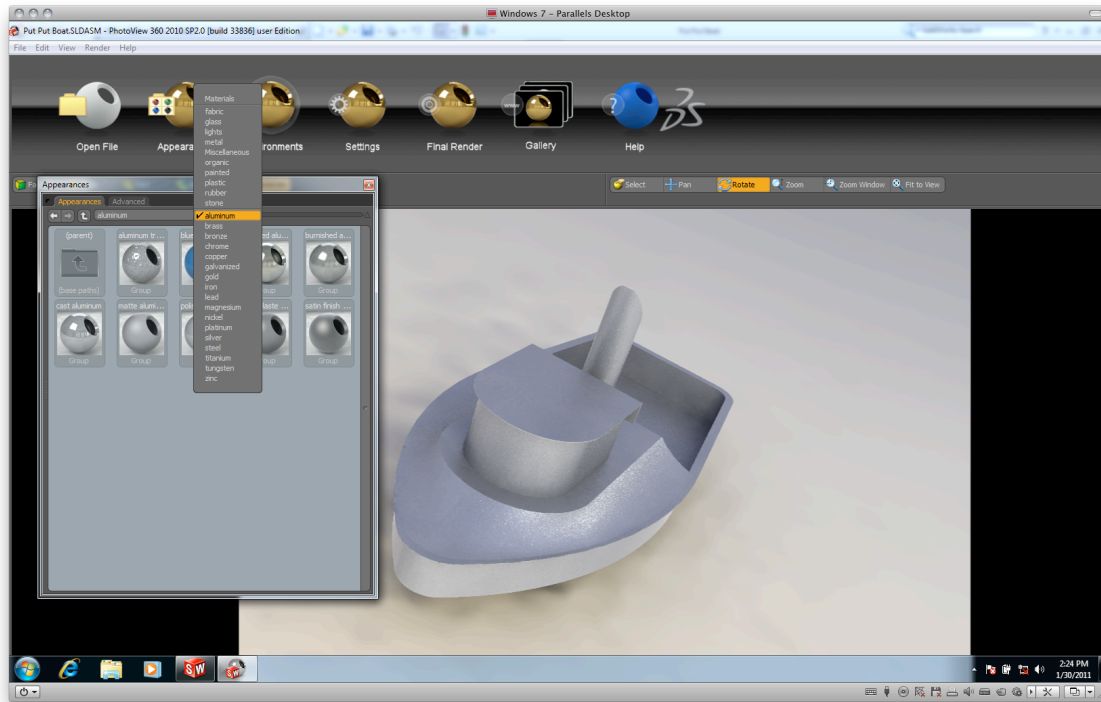
Let's play around with changing the appearance of our Put Put Boat:

Select **Appearance** in the top bar:

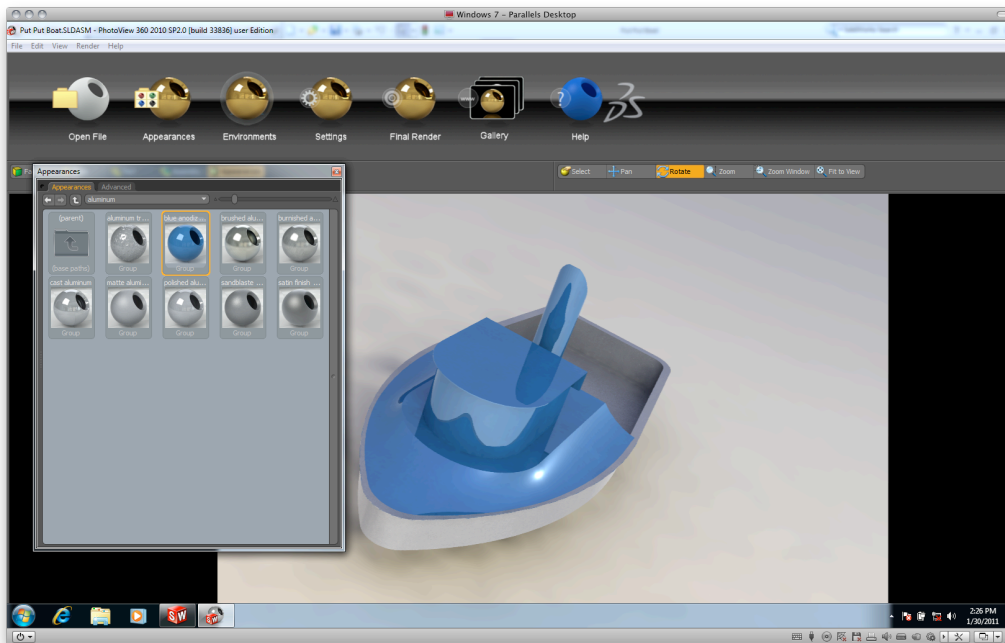


A pop up window will appear with different options. Double click any one of them to see how your render changes. By selecting the drop down menu, you can change the type of material like Aluminum or Fabric or Iron:



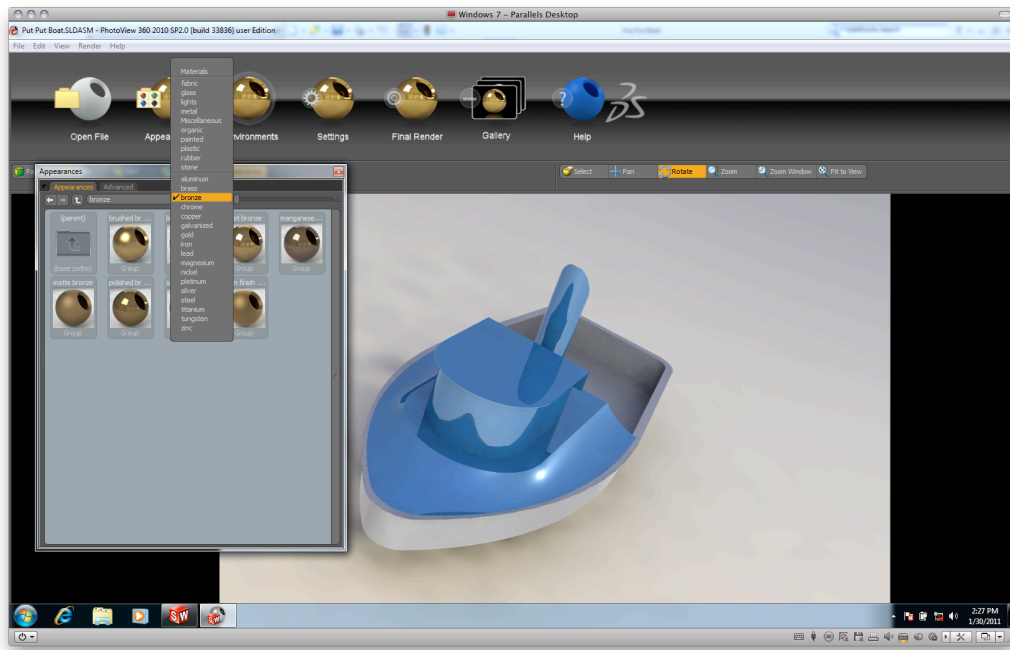


To make a part of your model a certain material, drag and drop your material onto the part of model you want to change – in this case, we chose Blue Anodize for the top of the boat:

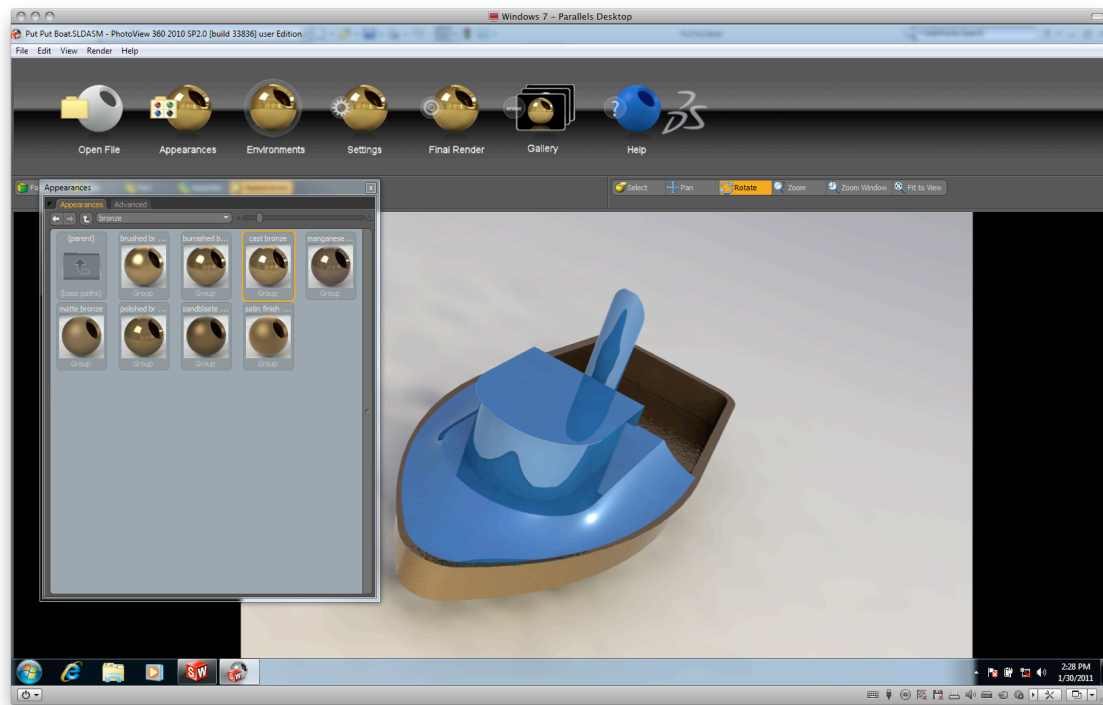


Do you see a difference?

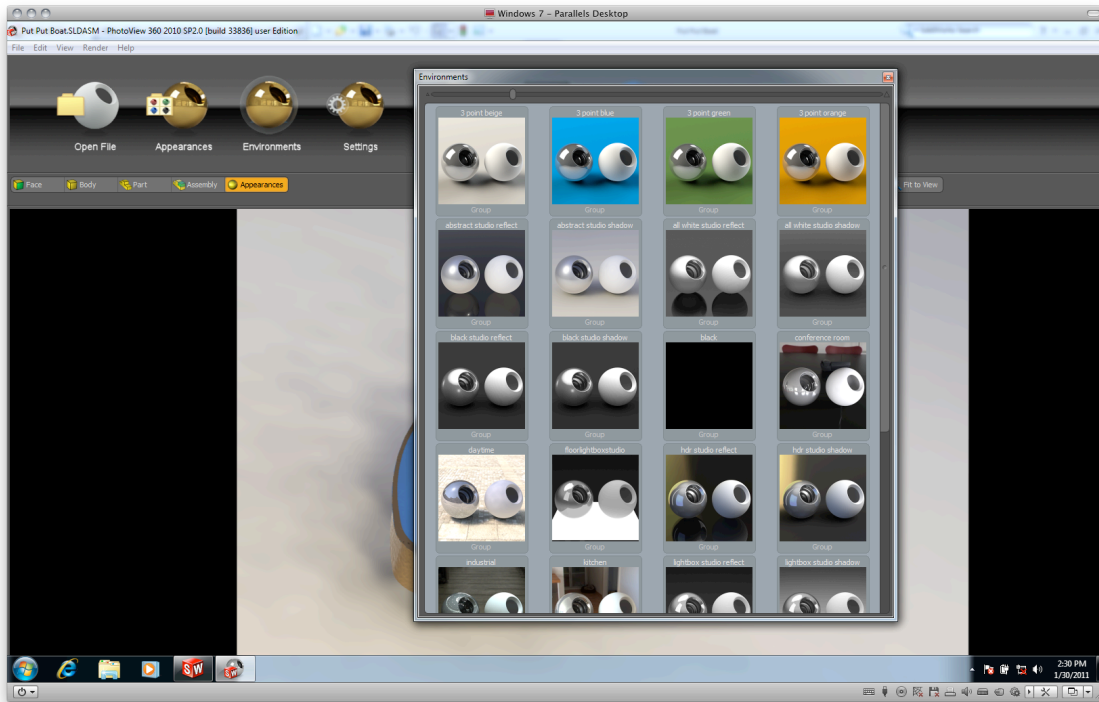
Next, the bottom of the boat is going to be a cast bronze. To do this, select the drop down menu and change the material to Bronze. Select **Cast Bronze** and then drag and drop onto the bottom or tip of the boat:



Do you notice a difference?



Close the Appearance Window and now select the **Environments** window. This will allow us to change the background color of the boat:



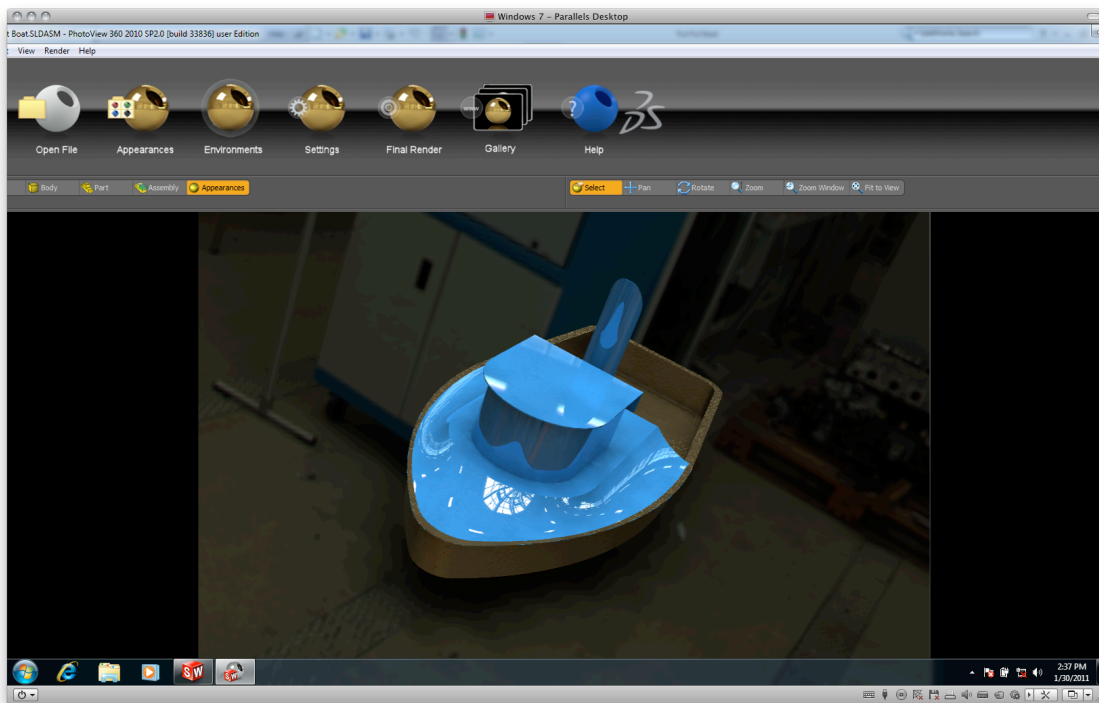
Move the window more to the side so that you can see your boat:



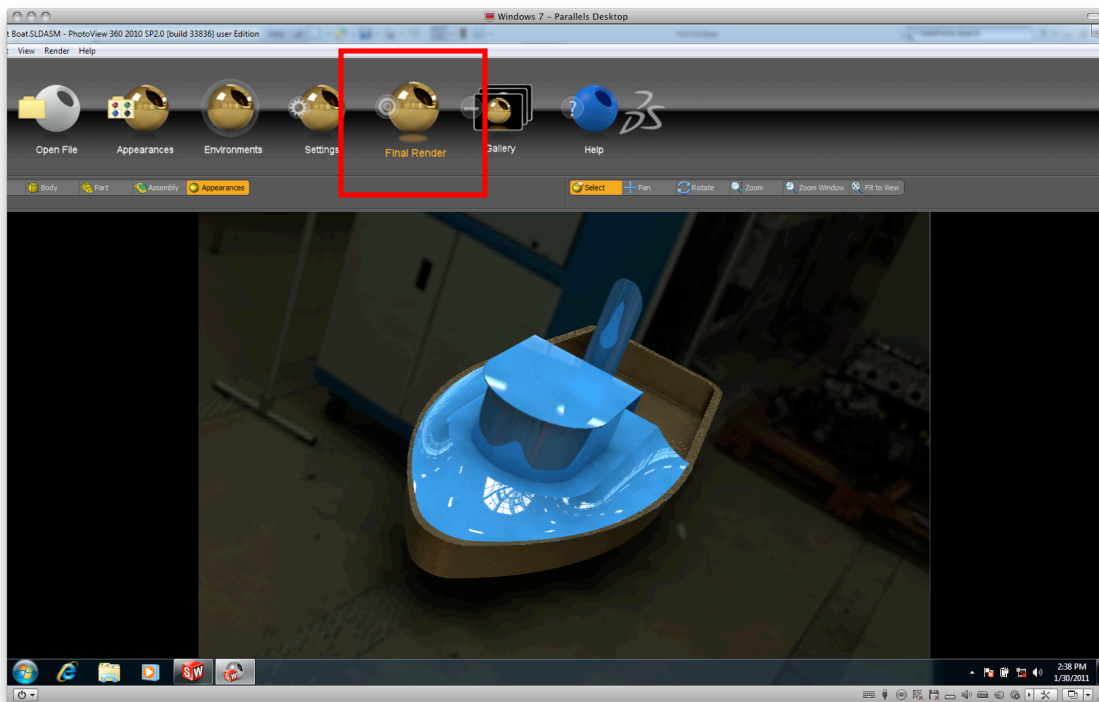
You can select any background you like by **double clicking** your selection. For this tutorial, we are going to select the **Industrial Background**.



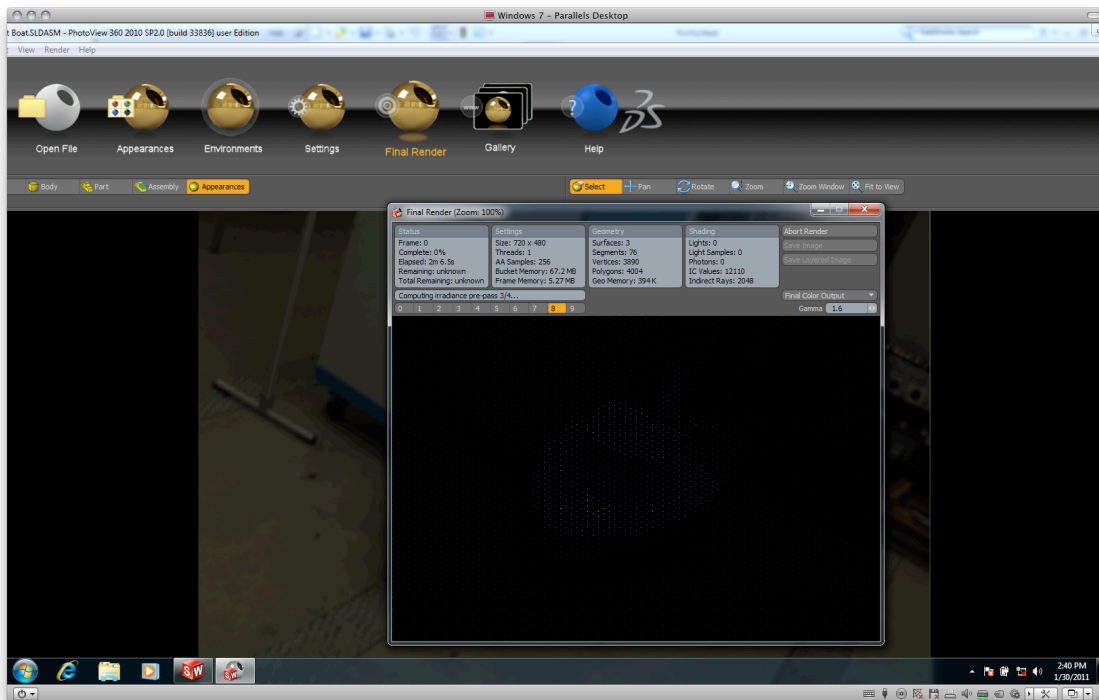
Now, if you selected the same options, your boat should look like this:



We are now going to render our final Put Put Boat. To do this, select **Final Render** in the top bar and wait:



Your screen should look like this. Be patient, rendering takes some time.

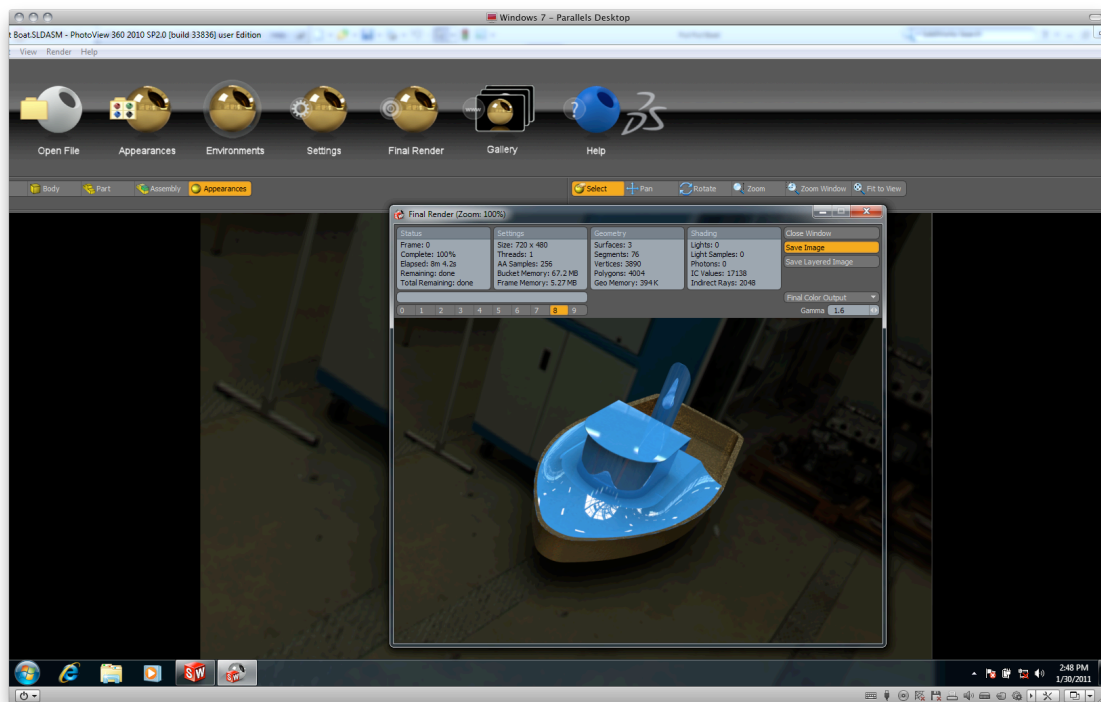


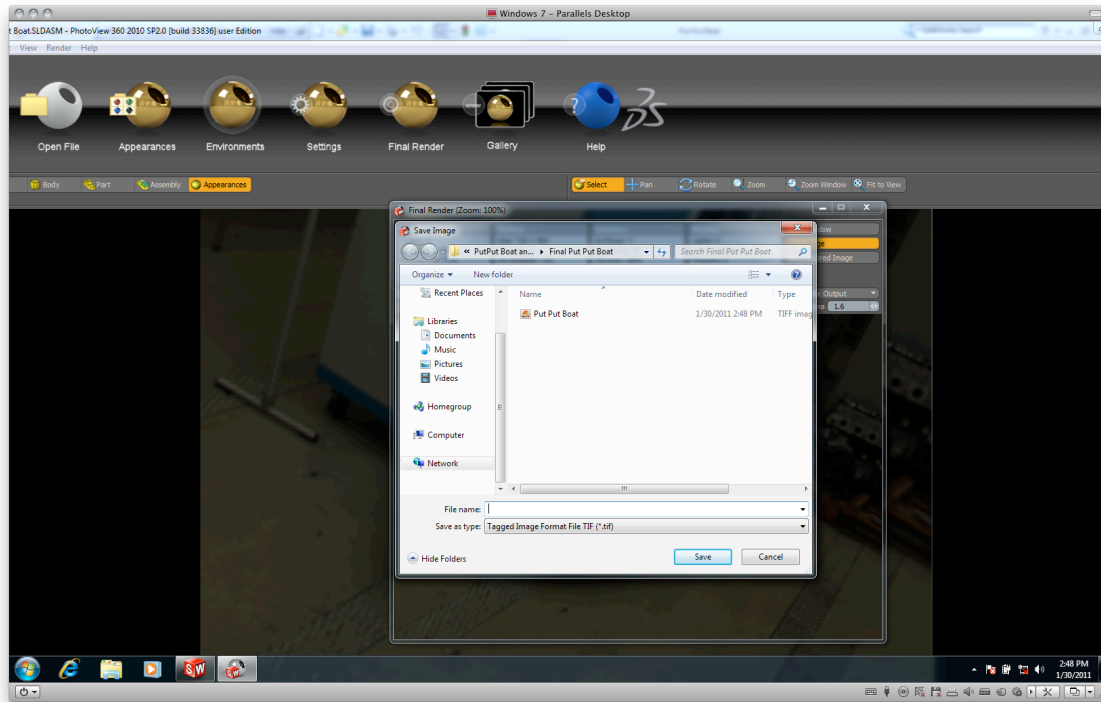
And time still is going...



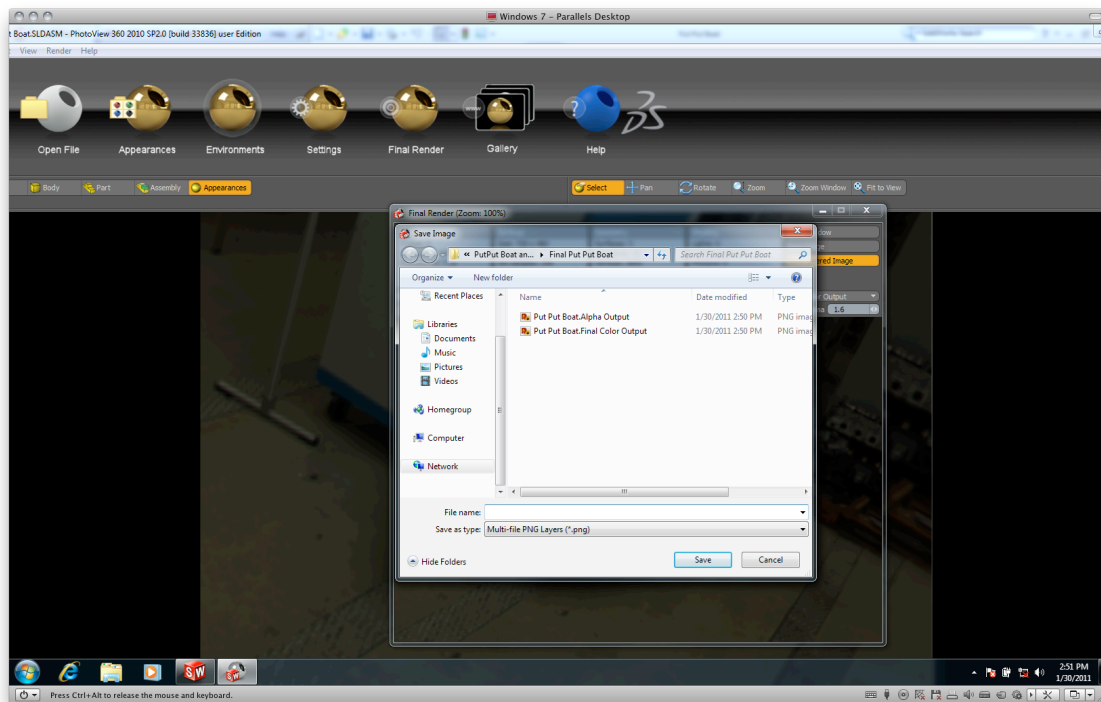
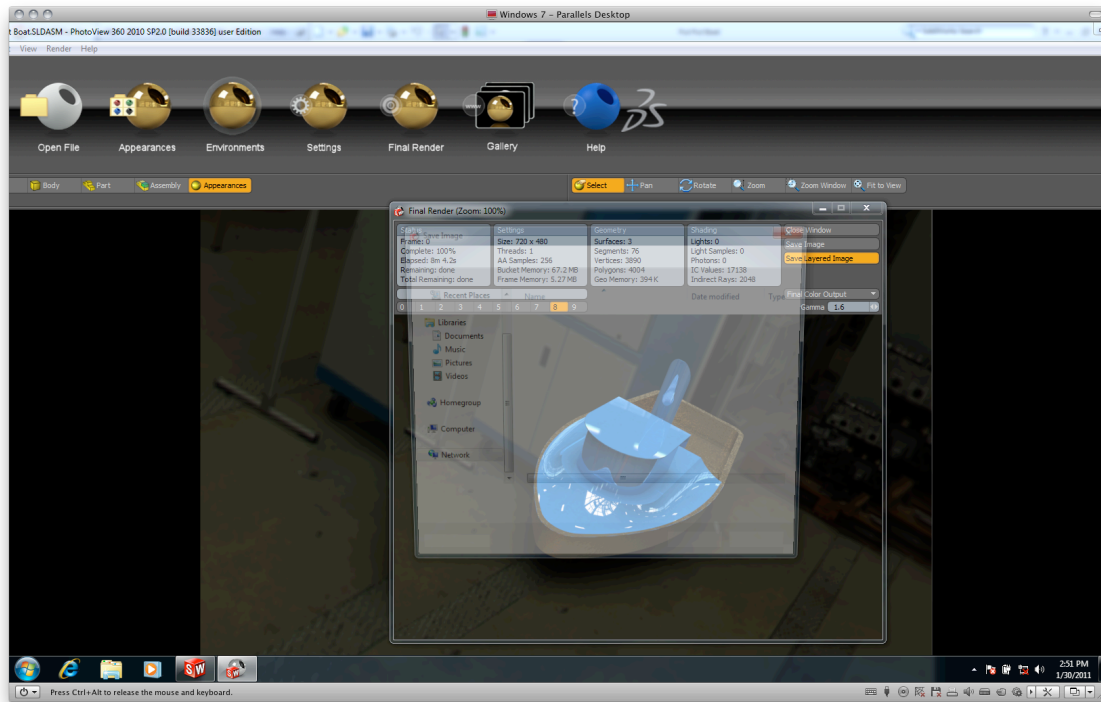
Save your file to the **Desktop**:

To save the image without the background, select **Save Image**:





To save your image with the background, select **Save Layered Image**:



Your final output will look like this:

