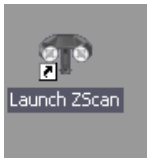
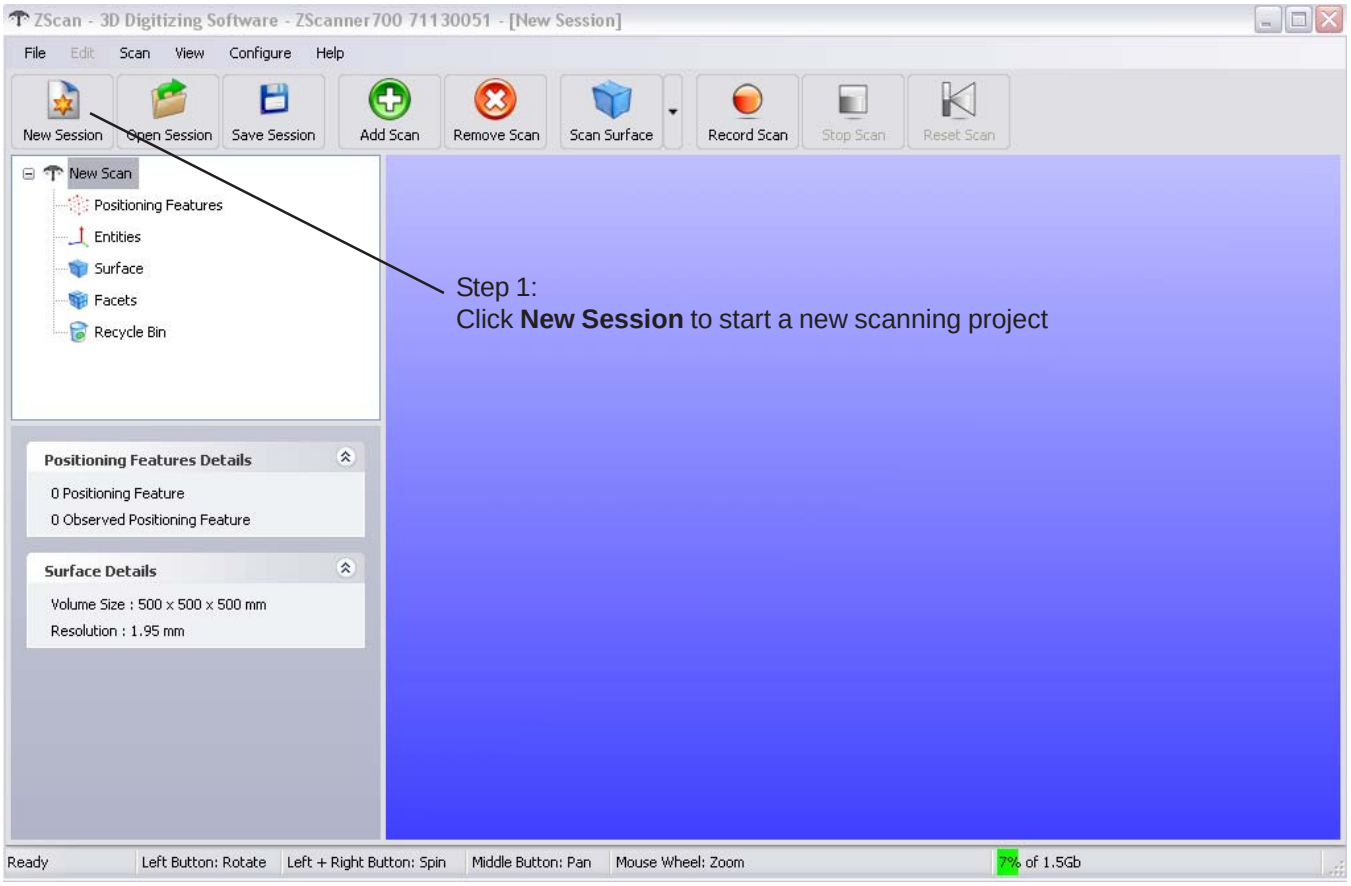
3D Laser Scanner - Z Corp

Digital Media lab Tutorial
Written By John Eberhart

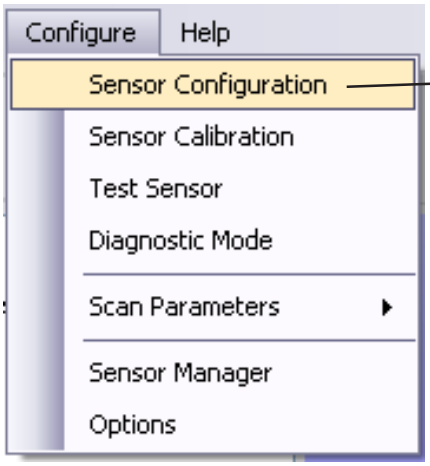


From the desktop or from the **Start>Programs** folder launch the **ZScan** software.

The following window will appear:

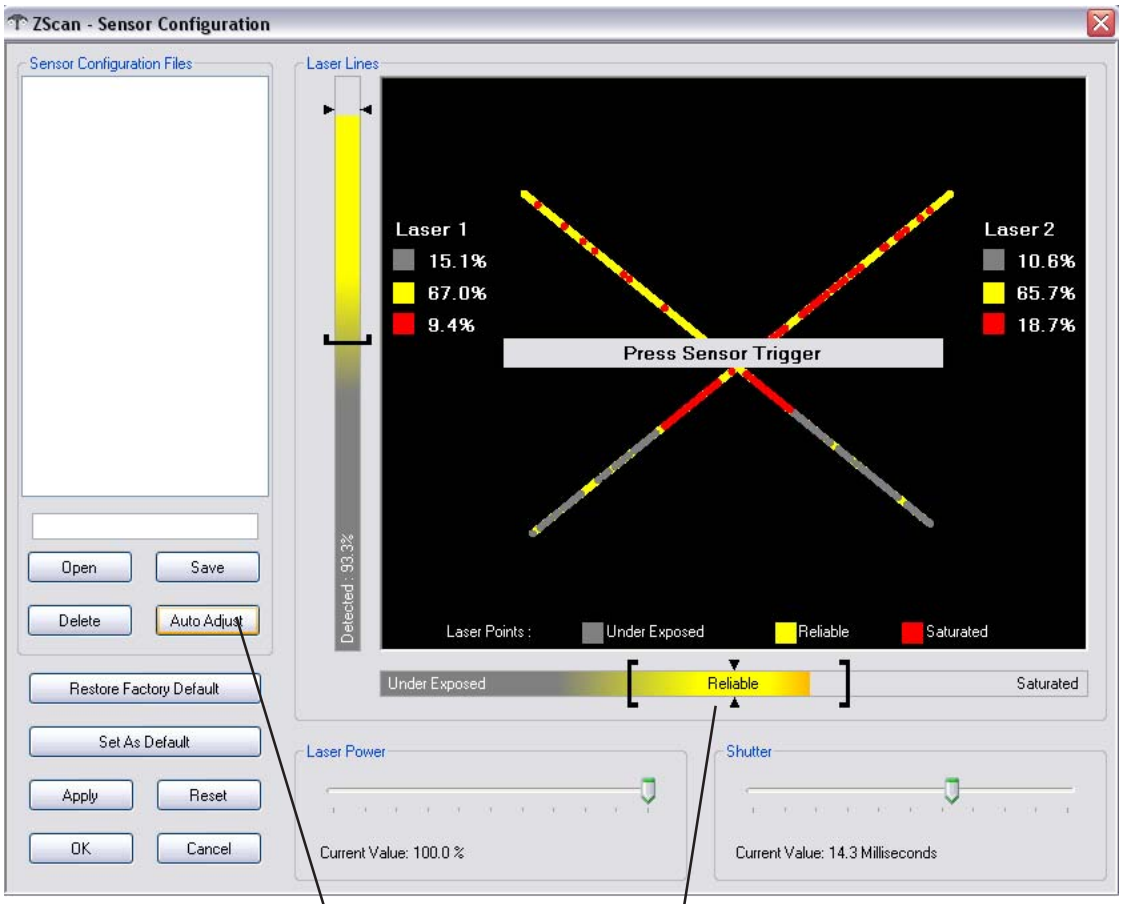


Step 2: Calibrate the Scanner for the appropriate laser and intensity:



Choose Configure>**Sensor Configuration**

Note: every time you start the laser scanner, you need to calibrate the correct laser and exposure settings for the object you are scanning.



Step 2A: Calibrating the scanner

1. Click the button Auto Adjust

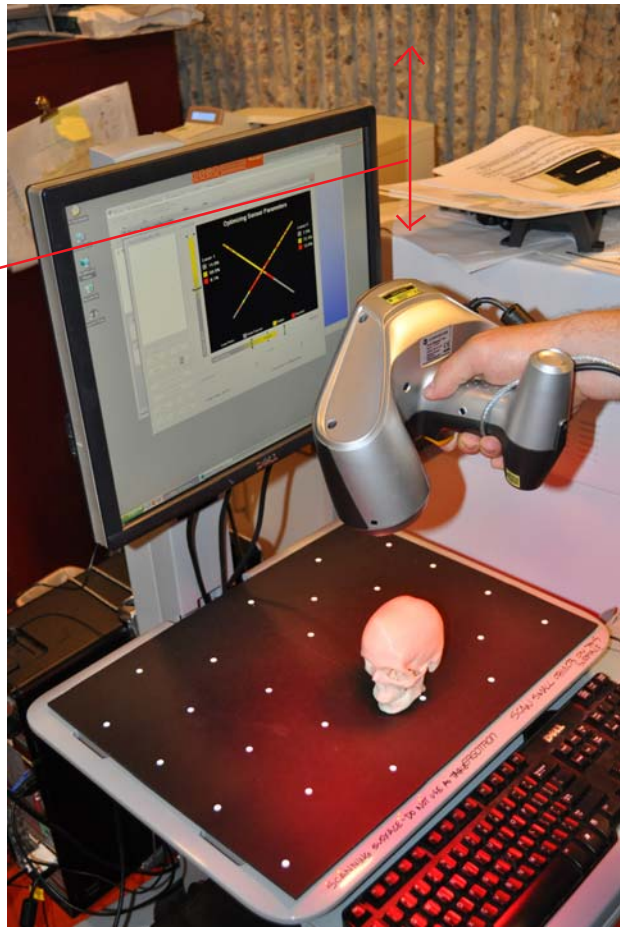
1. Place the object to be scanned on the scanning surface.

2. Place the scanner above and perpendicular to the object to be scanned.

3. While holding the trigger on the scanner, move the scanner vertically up and down until the yellow bar appears and is within the Reliable range.

Note: This may take a couple of minutes to calibrate.

When the Exposure is within Reliable, release the trigger on the scanner and click the **Apply** and **OK** button



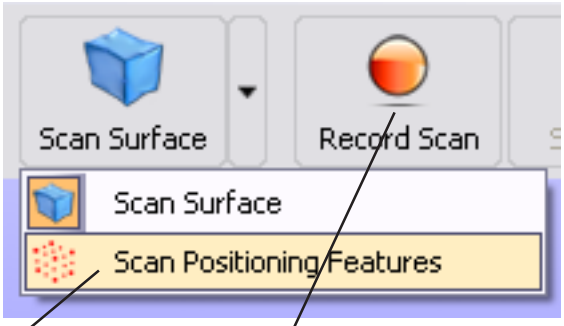
Step 3: Acquire the Scanning Reference Dots

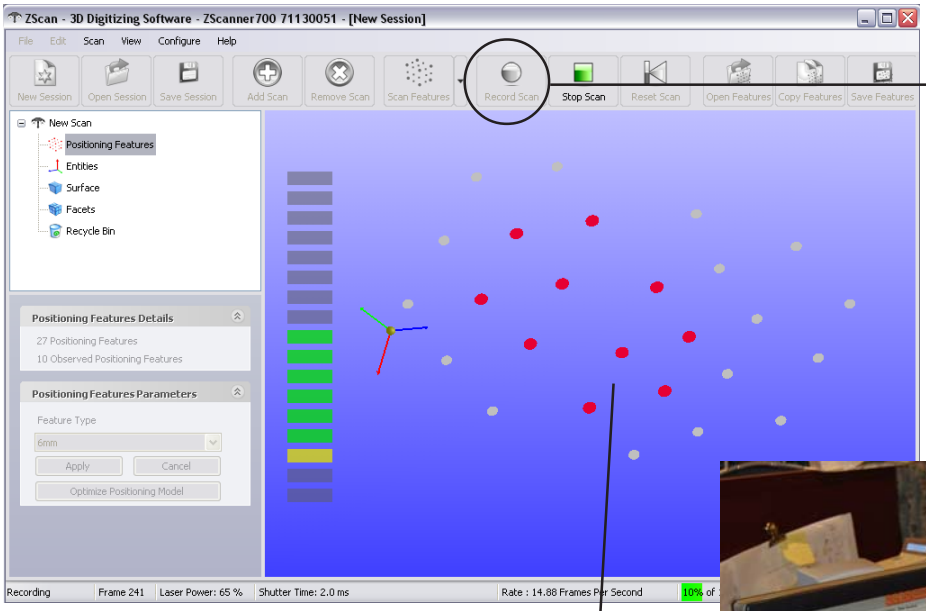
In order for the scanner to work, you need to scan the positioning dots. For small objects, scan the scanning surface on the mobile cart.

--OR--

You can place Dots on larger objects and then scan those dots.

Once you are ready to scan the positioning dots, click the **Scan Surface** drop down and Choose **Scan Positioning Features**



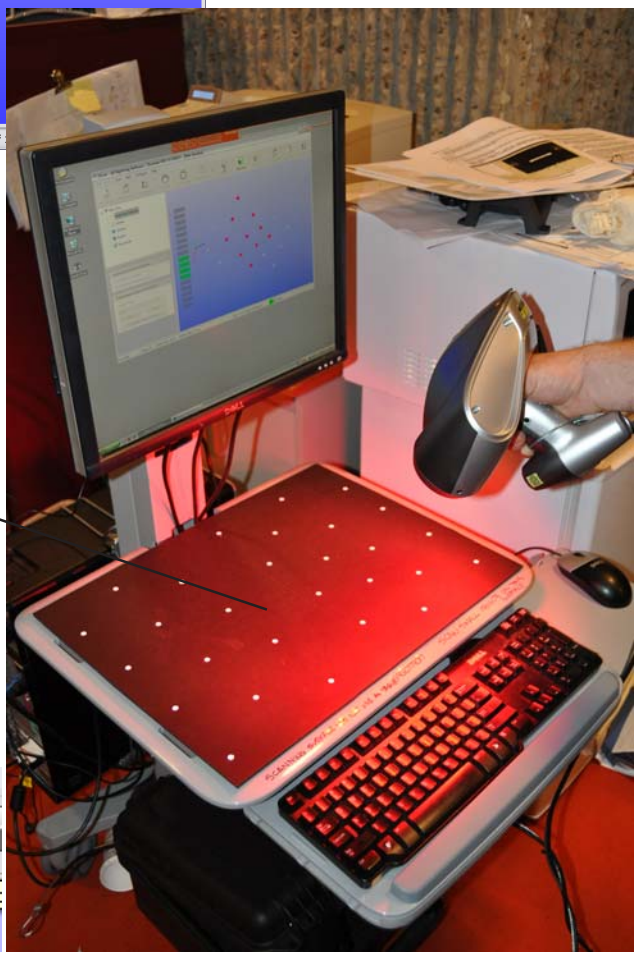


Click Record Scan to activate the scanner.

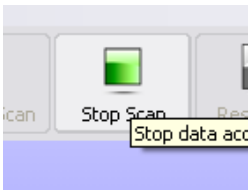
Step 4: Remove the object to be scanner, press the scanner trigger and move the scanner over the dots. You will see them appear in the scanning software. Try to acquire as many scanning dots as possible.

Note: If you are scanning an object that you placed the dots onto, you will see the dots appear in 3D space.

These dots will be used to triangulate the position of the scanner relative to the object being scanned.

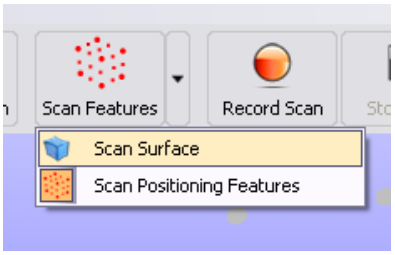


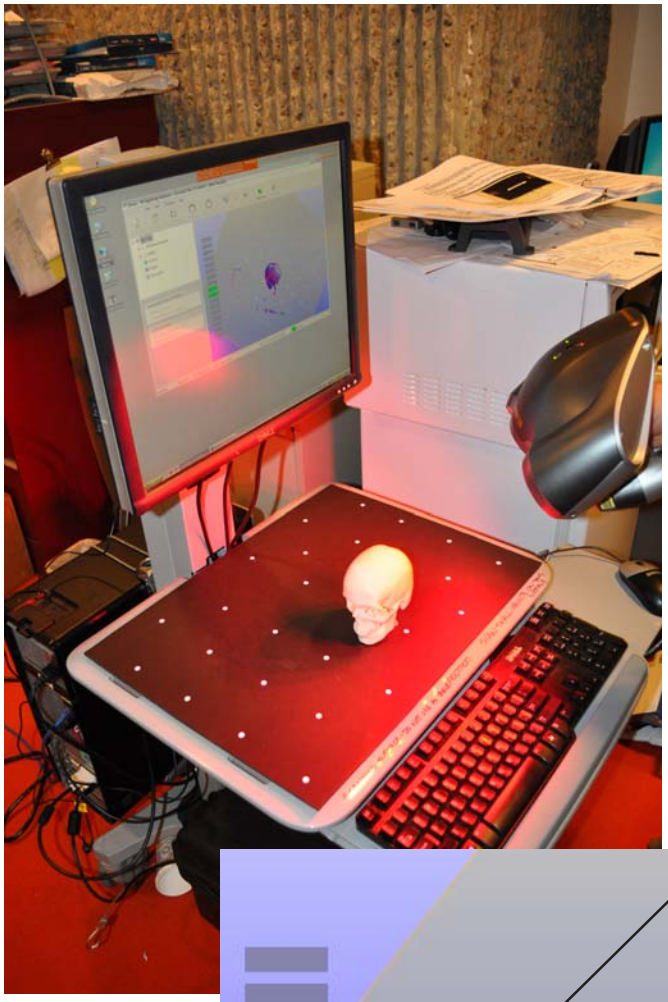
Once you have acquired the positioning dots, click **Stop Scan** to end the scan



Step 5: Scanning the Object:

Place the object to be scanned back onto the scanning surface.





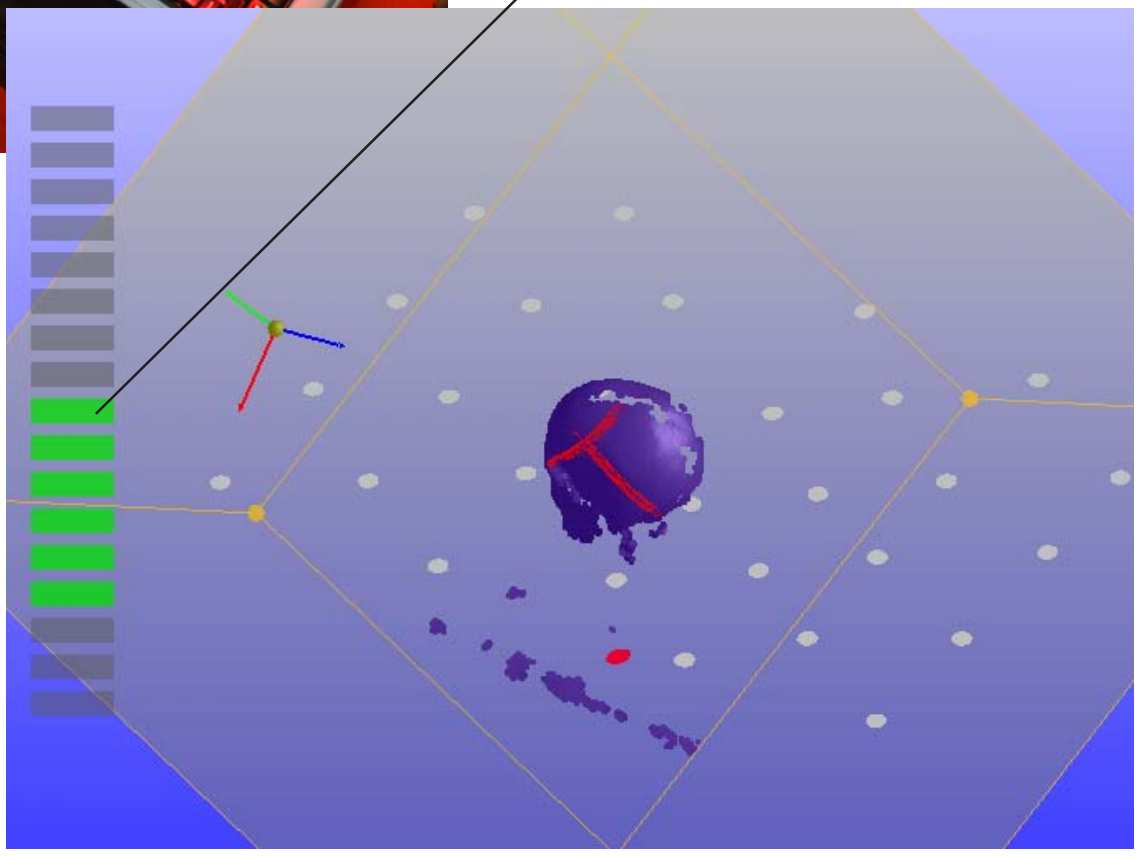
Under **Scan Features** dropdown, choose **Scan Surface**

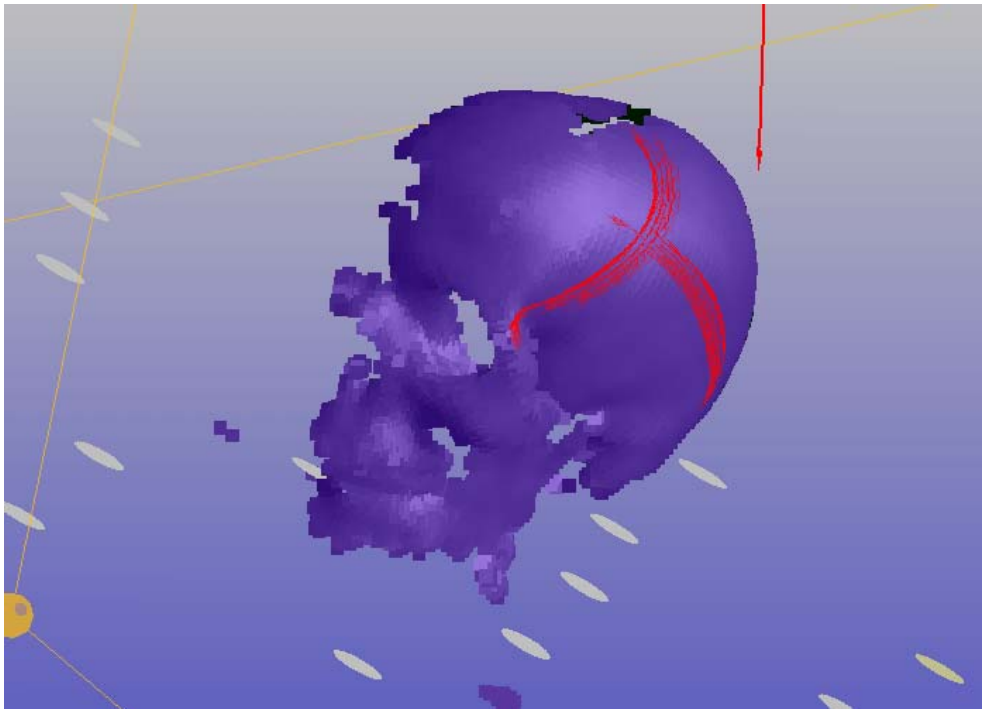
Hold the Scanner 12” or so from the object, and pull the trigger. Slowly move the scanner around the object always keeping the scanner pointed at the object.

The object will start to form on the scanning window.

TAKE YOUR TIME...The object will slowly develop in the computer screen.

Note: the scanner needs to be on average 12” or so from the object. The green status bars top the left helps you keep this position.

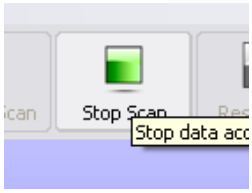




As you are scanning, you can release the trigger on the scanner and rotate the scanned digital model.

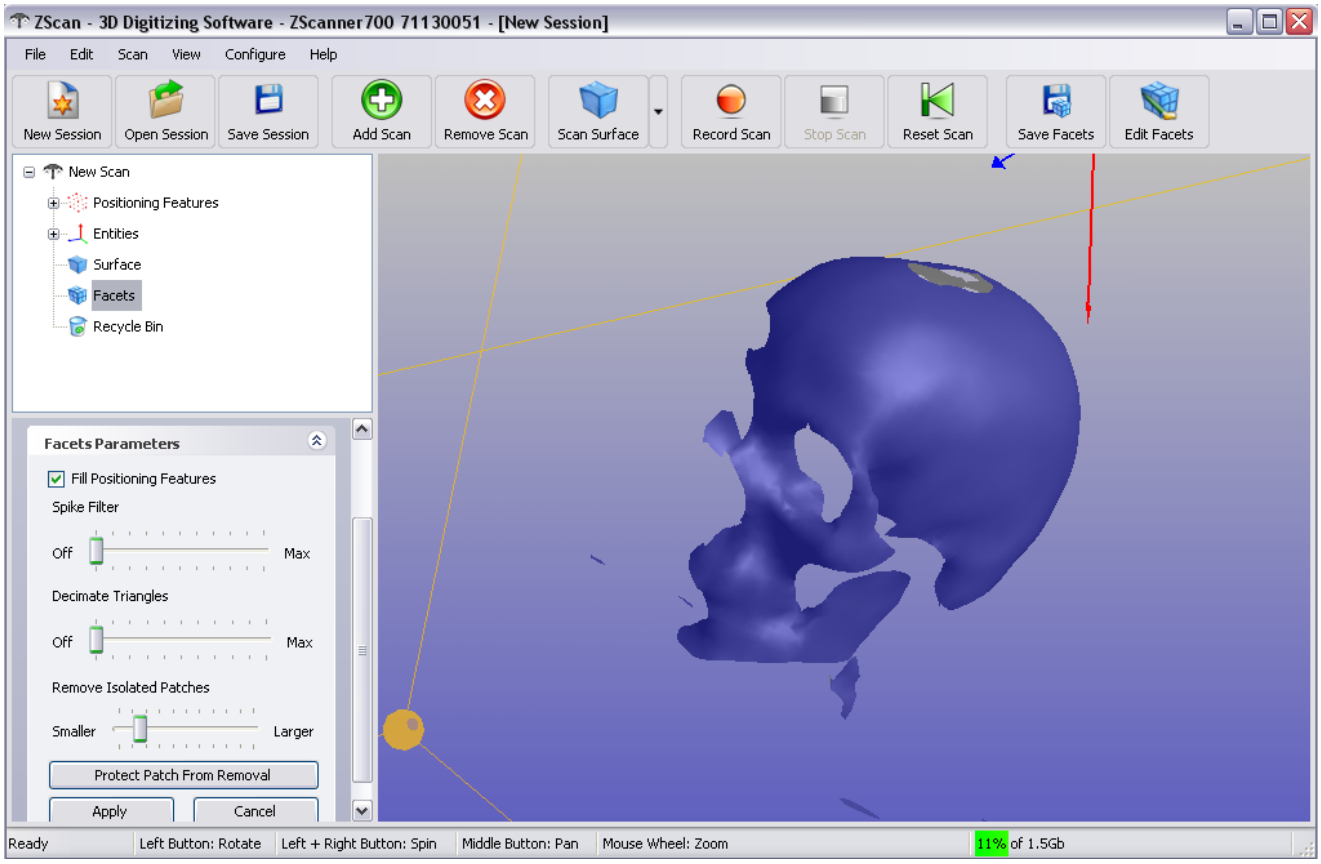
Note: This is a preview model and not the actual scan resolution.

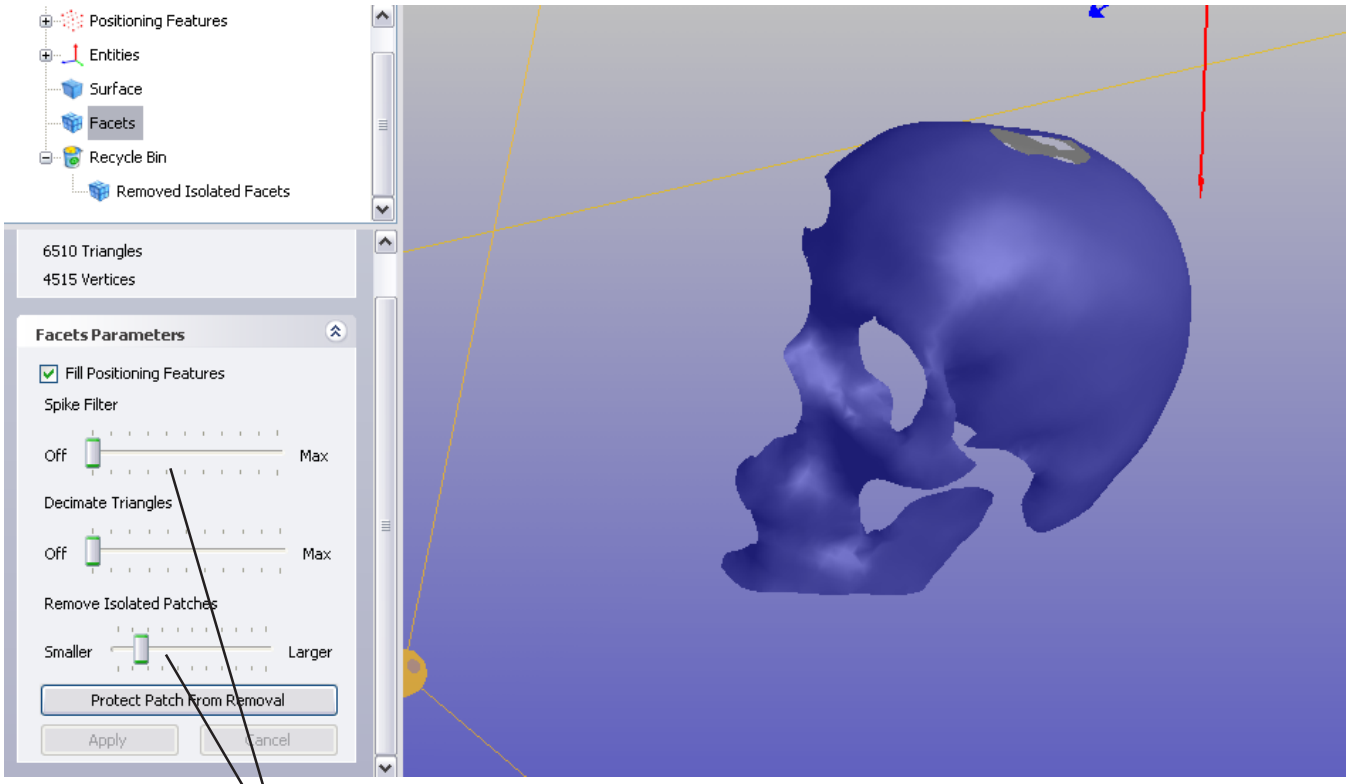
DO NOT move the object on the scanning table once you start scanning.



When you are done scanning, click the **Stop Scan** button to see the current scan.

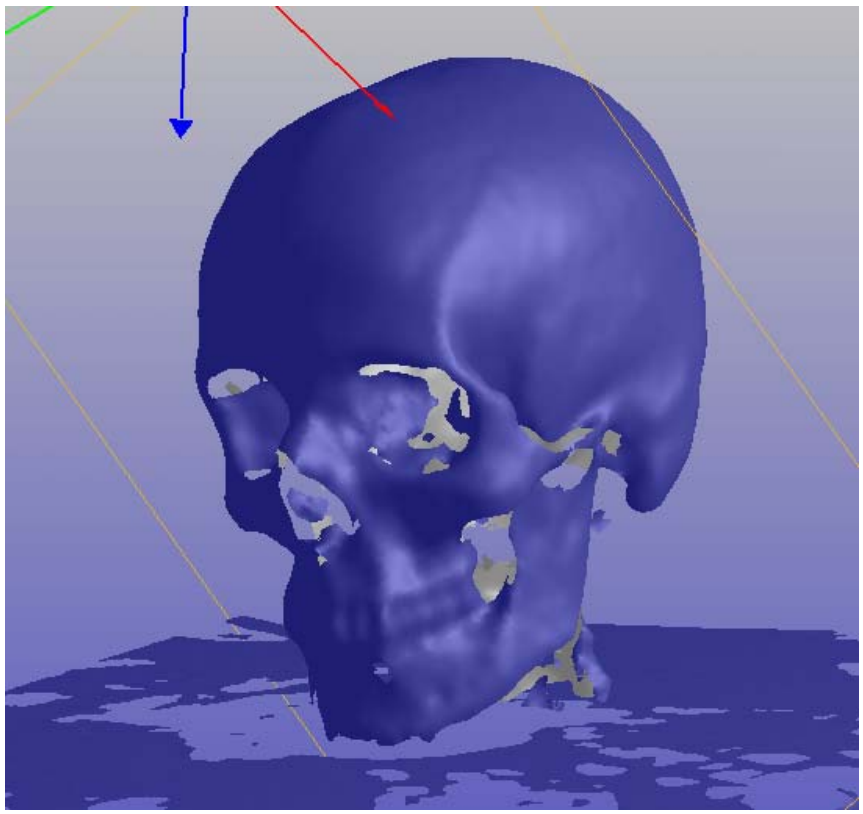
The actual scan will appear; to continue scanning-click **Record Scan** and resume.





You can use these tools to clean up the erroneous scanned elements in the model while you scan.

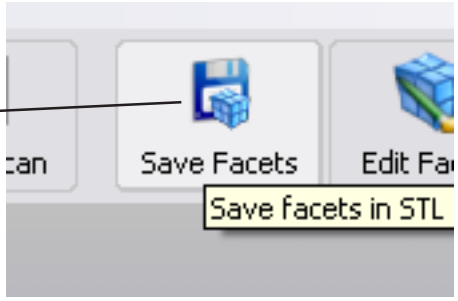
The completed scan after about 5 minutes of scanning.

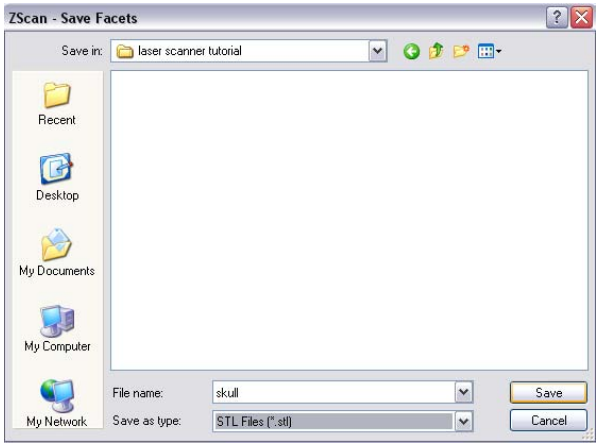


Step 6: Saving the scanned model as an STL file:

Click on **Stop Scan** if needed, and then click **Save Facets**.

This will save an STL file of your scanned model.

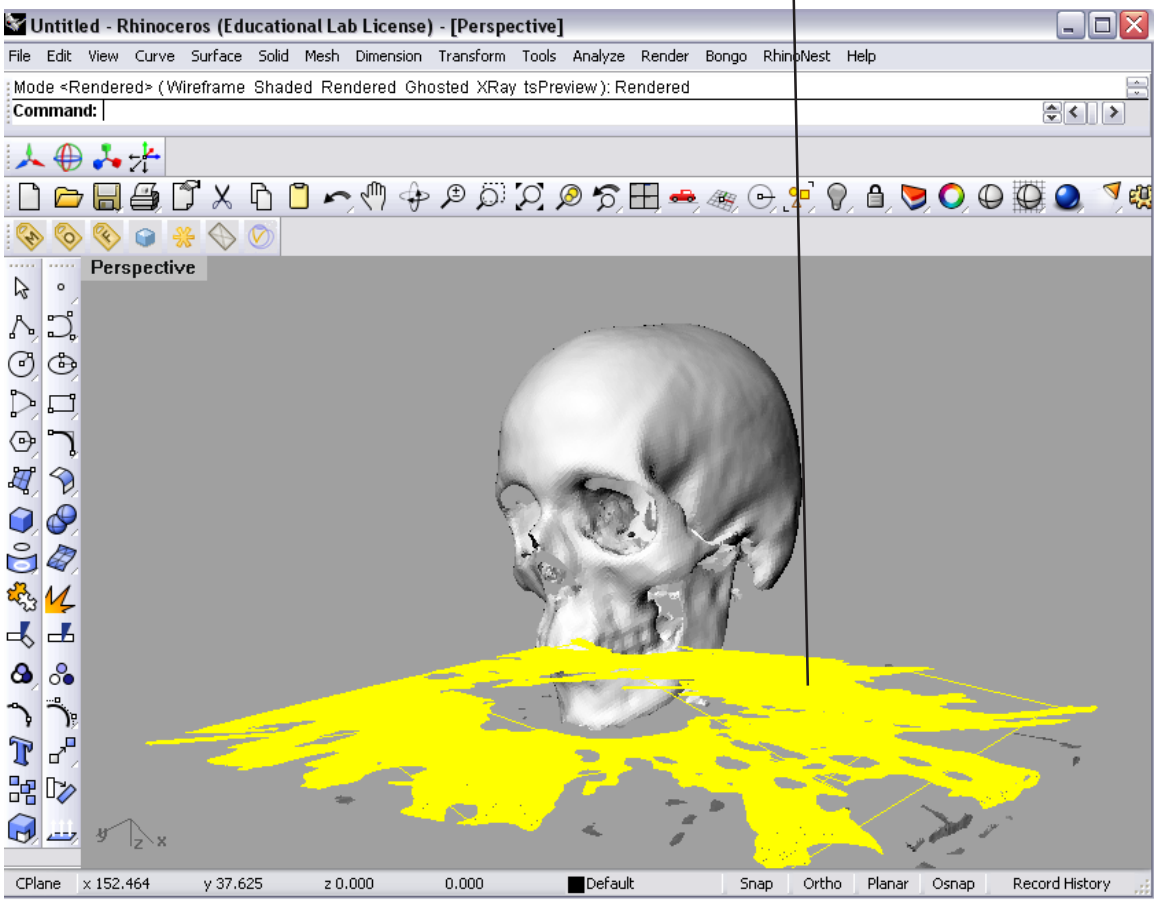




Save the model to your User Account and log off of the scanning station.

You can edit your model at your workstation.

Model opened in Rhino.
Note: You can select parts of the scan and delete it.



To fill a hole in a mesh in Rhino, click **Mesh>Mesh Repair Tool>Fill Hole.** Click on the edge of the hole boundry, and the hole will fill.