Scanning the football

Jcs – 9/28/2012

Reference: NextEngine User's Guide

1. Create the folder: C:\Temp\Football

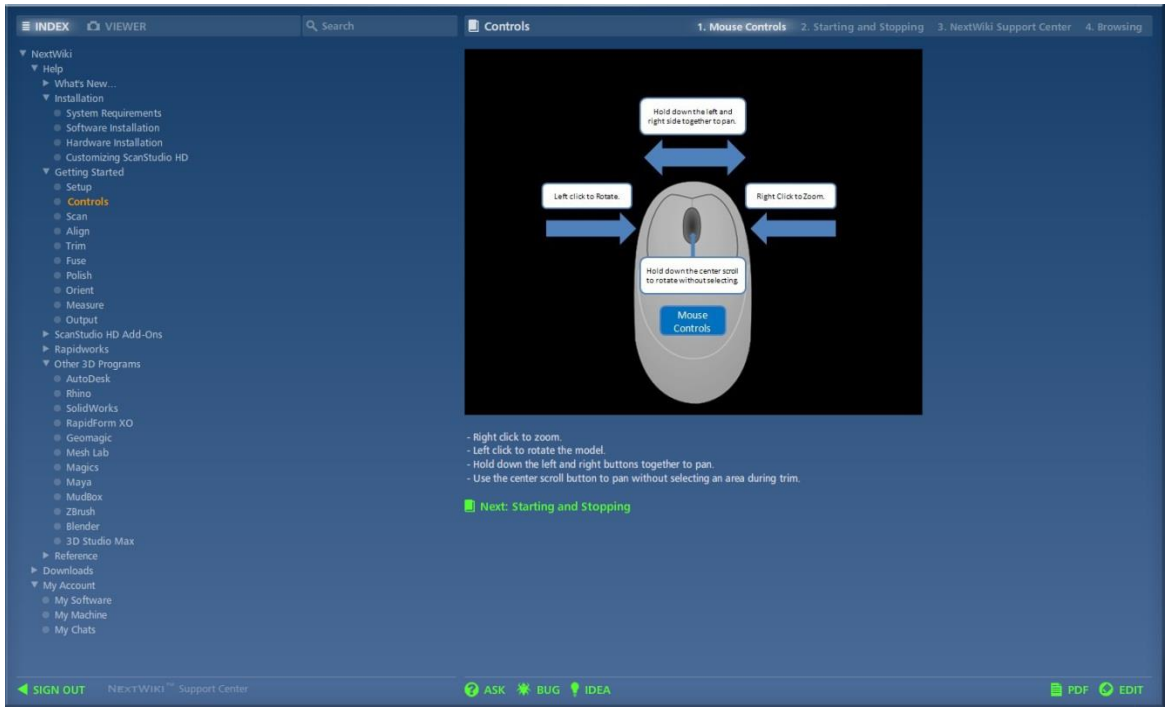
2. Start ScanStudio 

Select: 

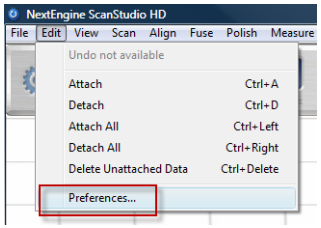
3. Study the material, especially Getting Started
    a. Setup
    b. Controls
    c. Scan
    d. Align
    e. Trim
    f. Fuse
    g. Polish
    h. Orient
    i. Measure
    j. Output

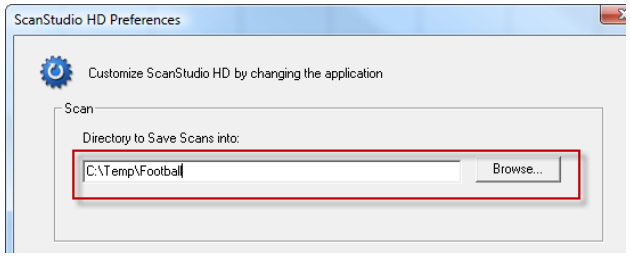
Note

- these steps will be used to do the intial scan, refer to the material presented for clarification and additional information.
- Start by selecting controls to see how to use the mouse.
- Leave this window open for study / referral



4. Select: Edit | Preferences



5. Set the directory to save scans into 

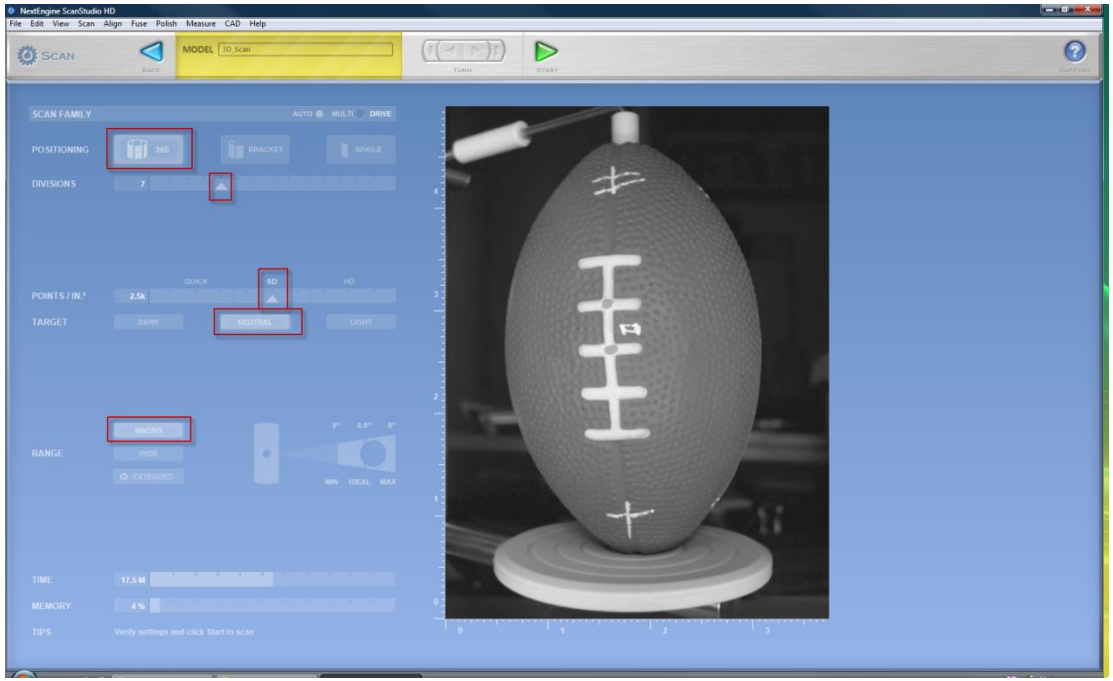
Setup

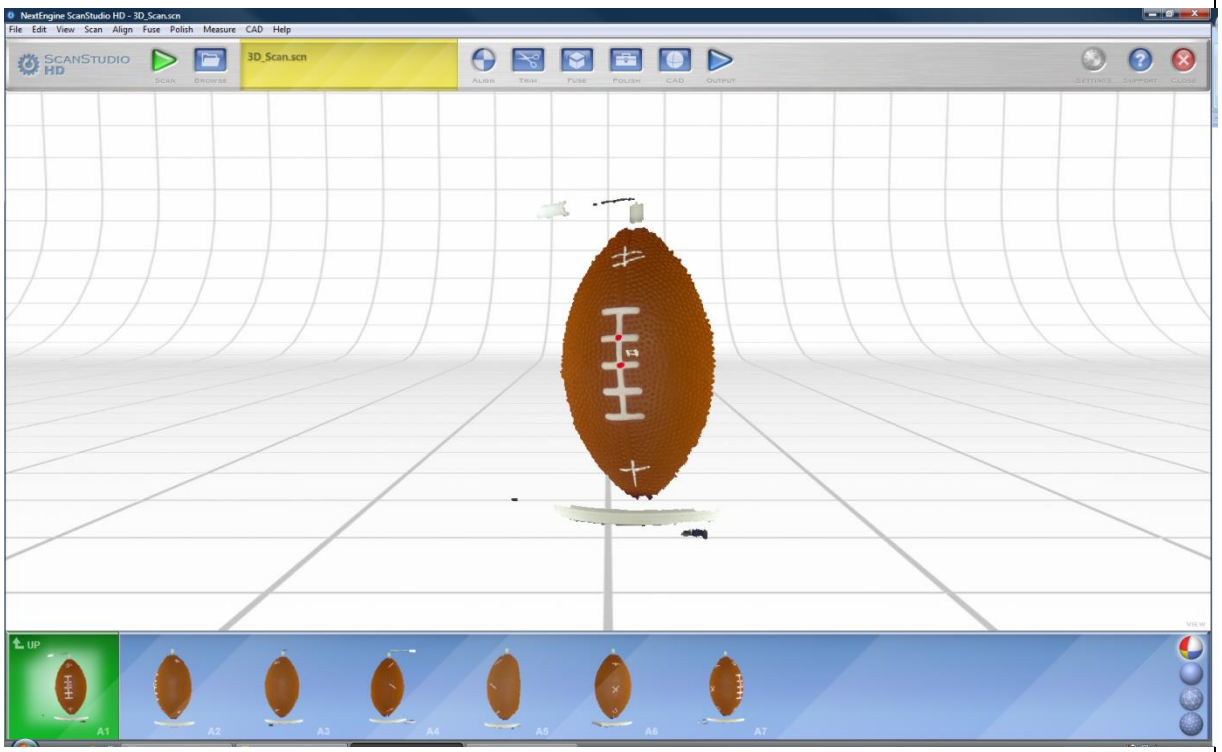
1. Set up Scanner and the Target object (Football). Center the football over the turntable, and center it in the screen (See below)

Scan

1. Select: Scan 

2. Select the following
    a. Positioning: 360
    b. Divisions: 7
    c. Points / in^3: 2.5k
    d. Target: Neutral
    e. Range: Macro
3. Select: Start 

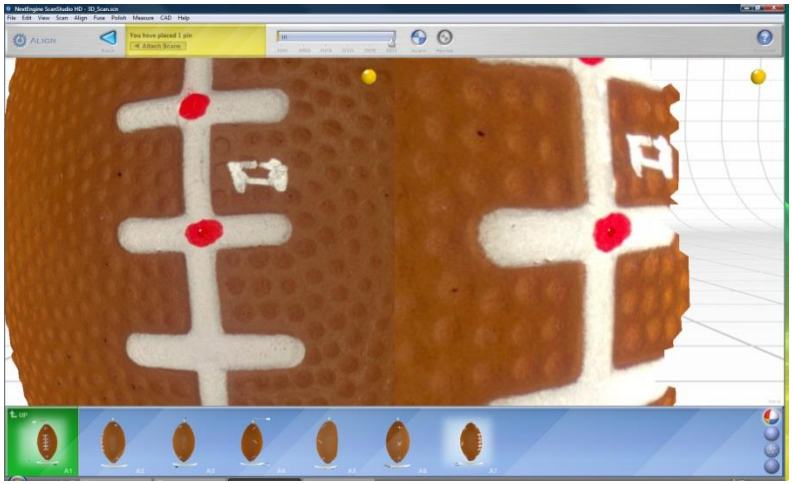


Results	

Align (Note: This step may not be required in the current version of the software)

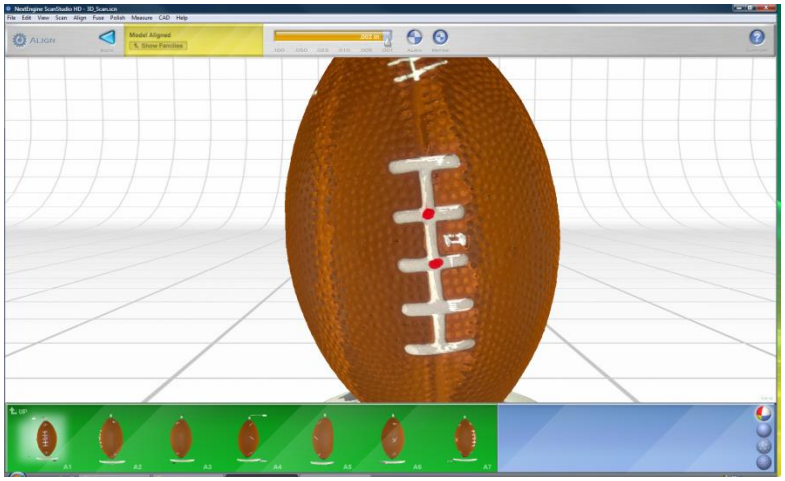
1. Select: Align

2. Drag the red dot to a common point.



3. Select: Align

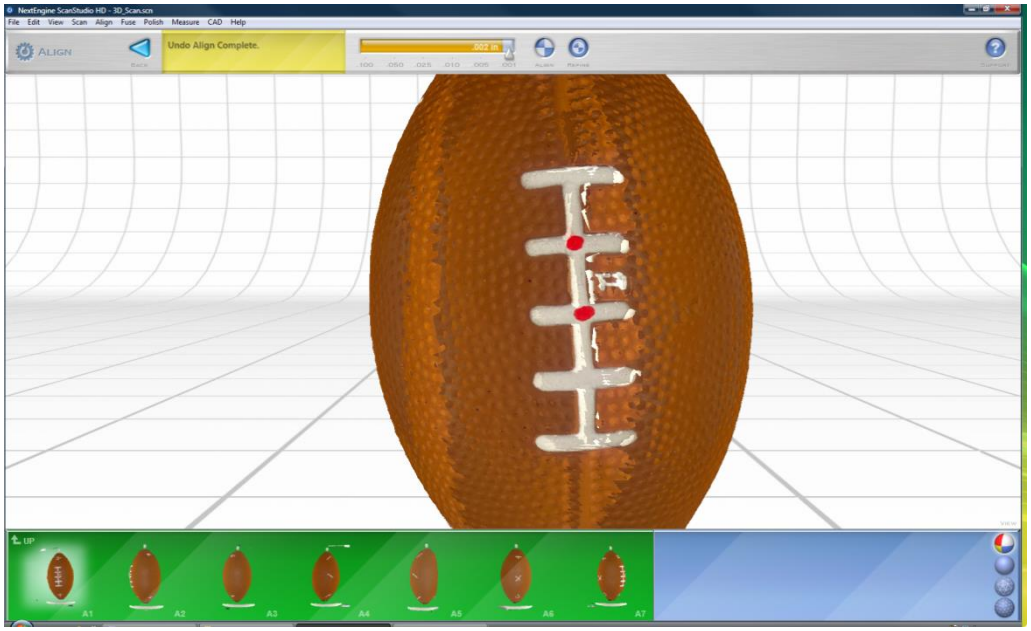
Results



Notes:
If the results look something like this try the following:

1. Select: Refine

2. Repeat the alignment process. Select a different refernce point



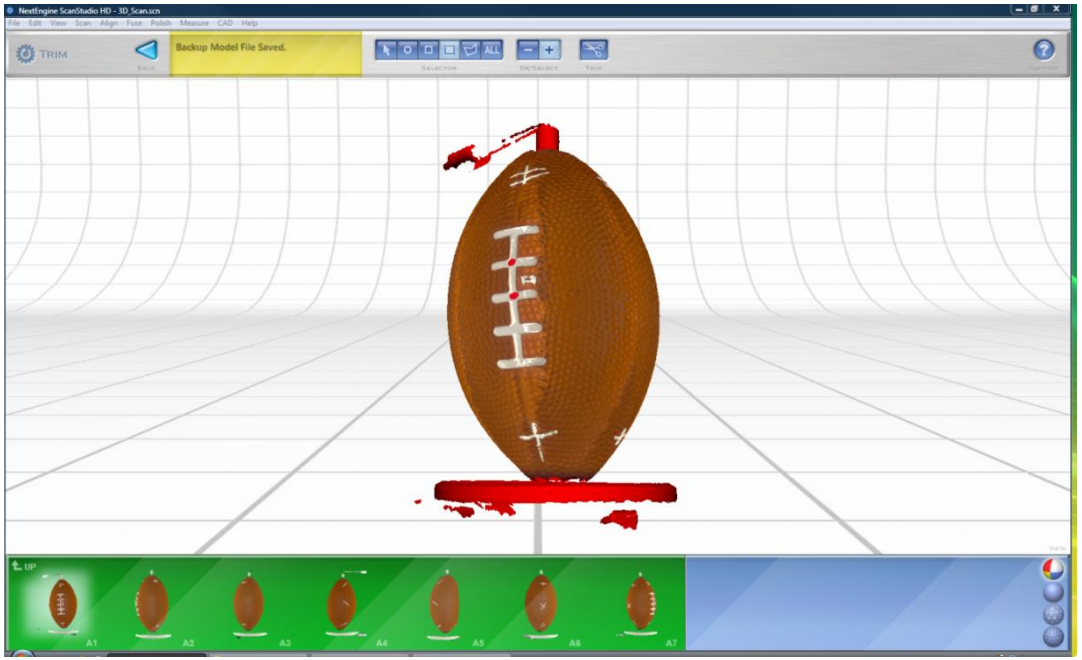
Trim

1. Select: Trim 

2. Use the following controls

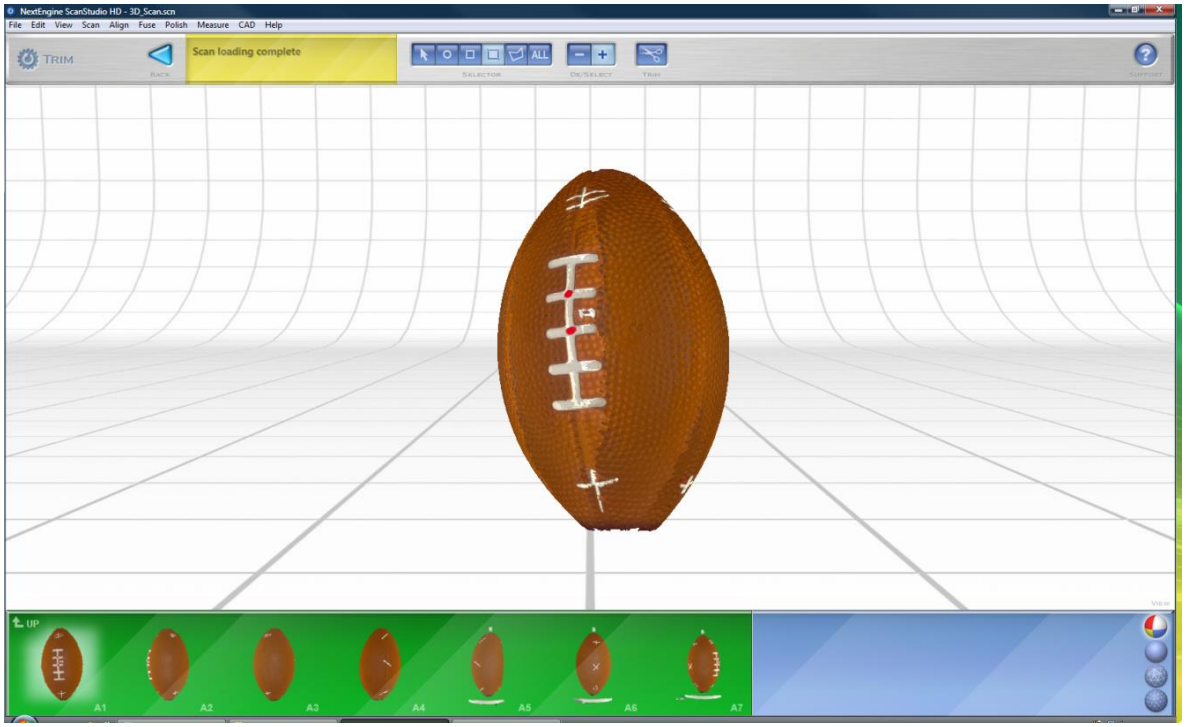
   a. Pointer mode 

   b. Rectangular Selection: 



1. Select: Trim

Results:

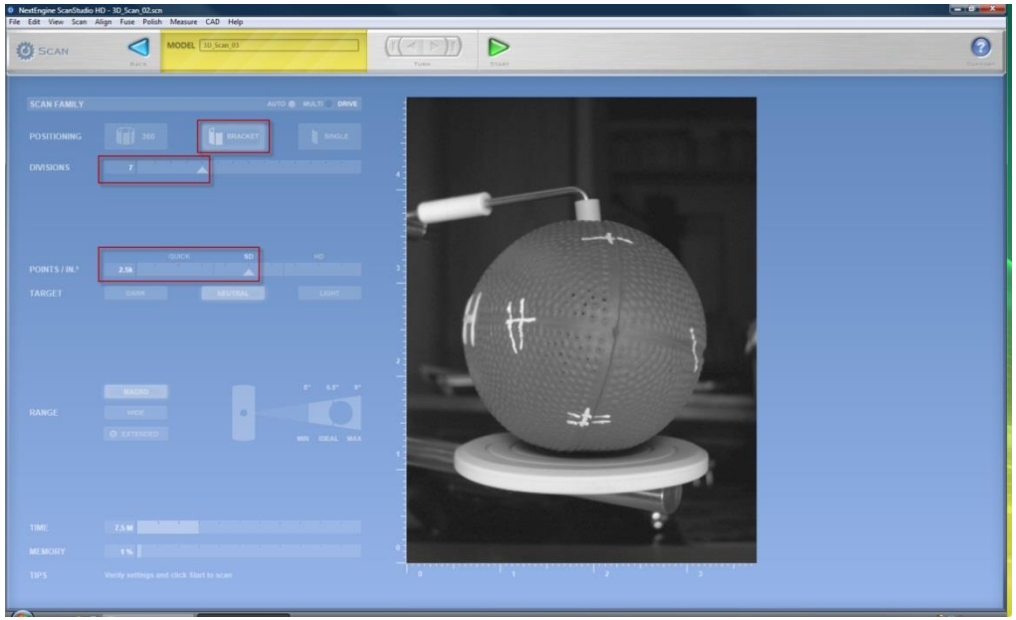


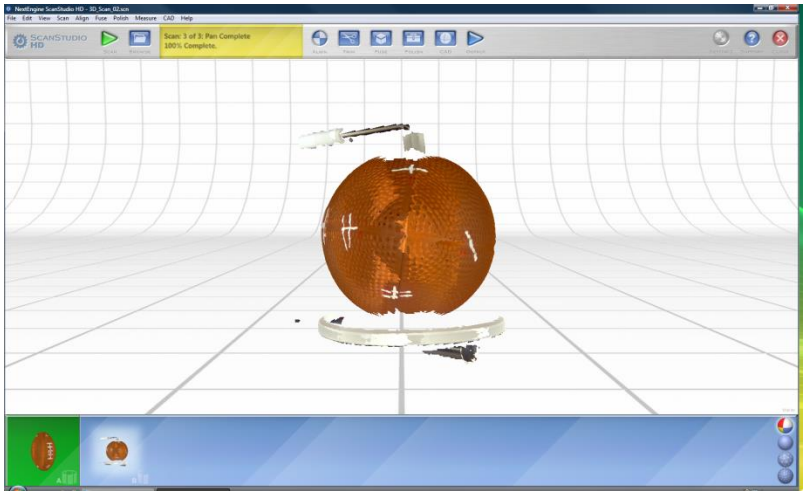
Scan

1. Select: Scan 

2. Select the following
    a. Positioning: Bracket
    b. Divisions: 7
    c. Points / in^3: 2.5k
    d. Target: Neutral
    e. Range: Macro

3. Select: Start 



Results	

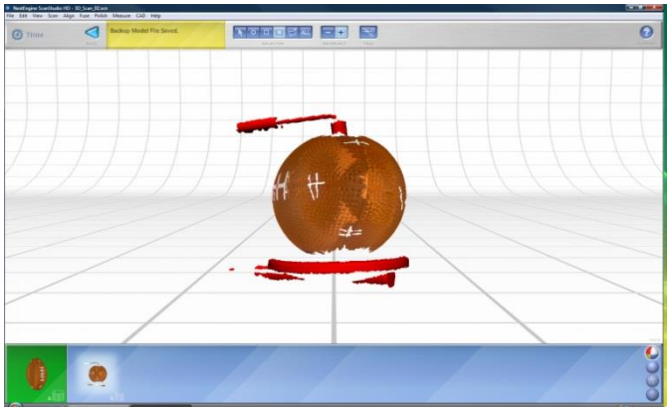
Trim

3. Select: Trim 

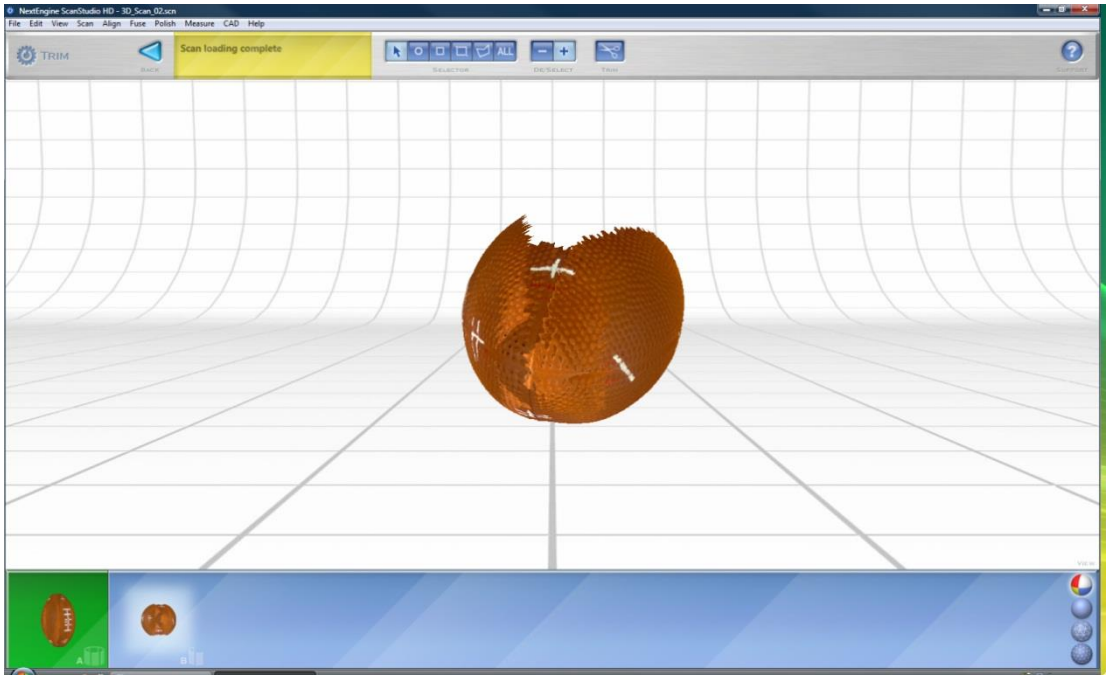
4. Use the following controls

   a. Pointer mode 

   b. Rectangular Selection: 



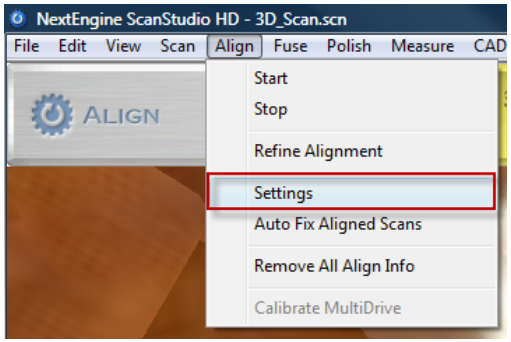
2. Select: Trim 

Results:	

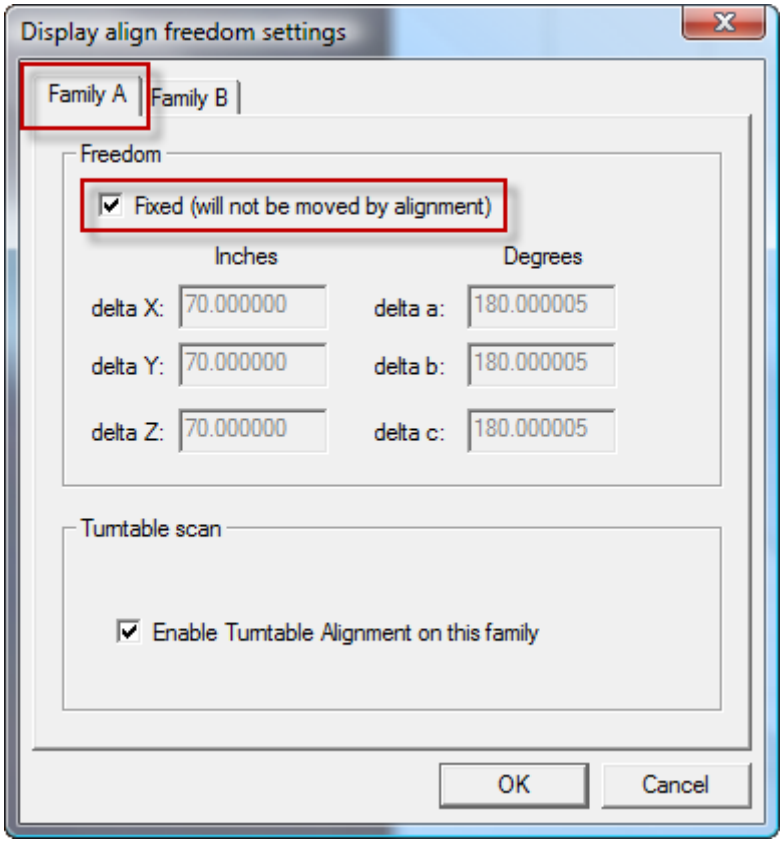
Align

1. Select: Align 

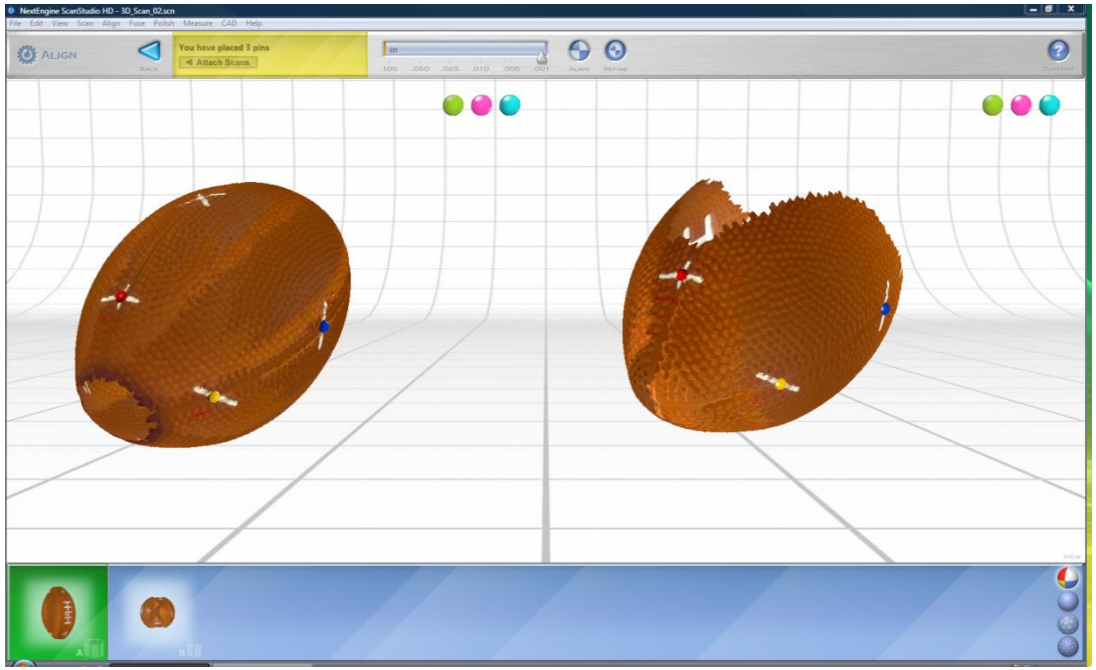
2. Select: Align | Settings



3. Select
    a. Family A
    b. Fixed



4. Locate pins a 3 common points on each family



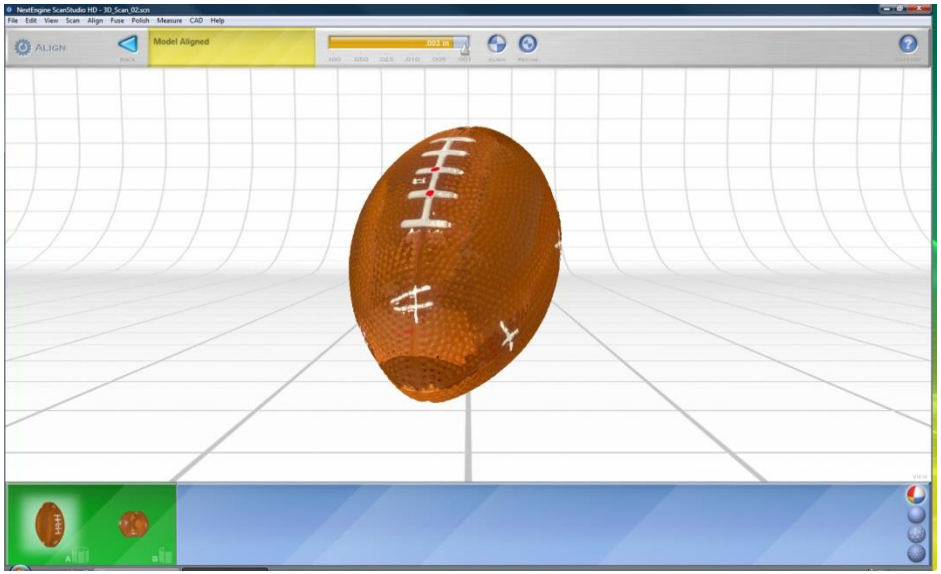
5. Select: Align

Results:

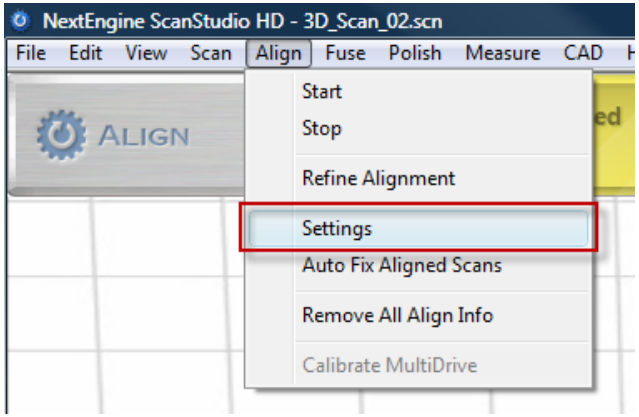
If needed do the following

1. Select: Refine

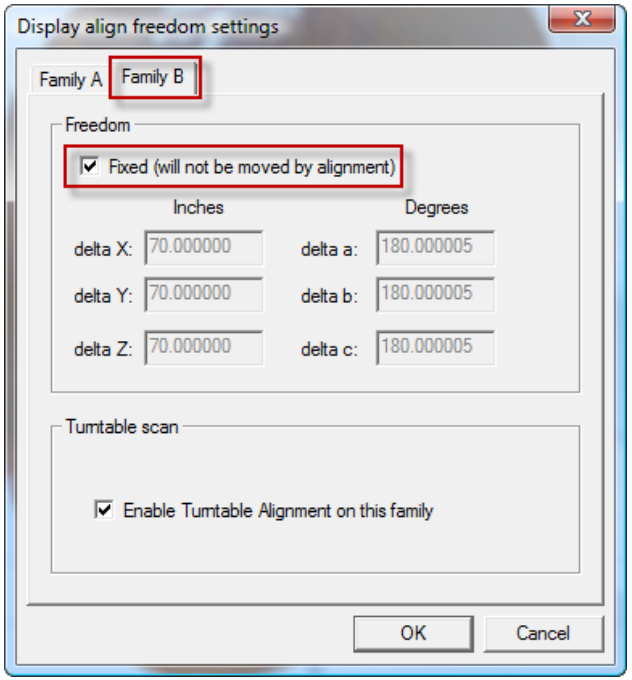
2. May need to check / re-do other alignments



6. Select: Align |Settings

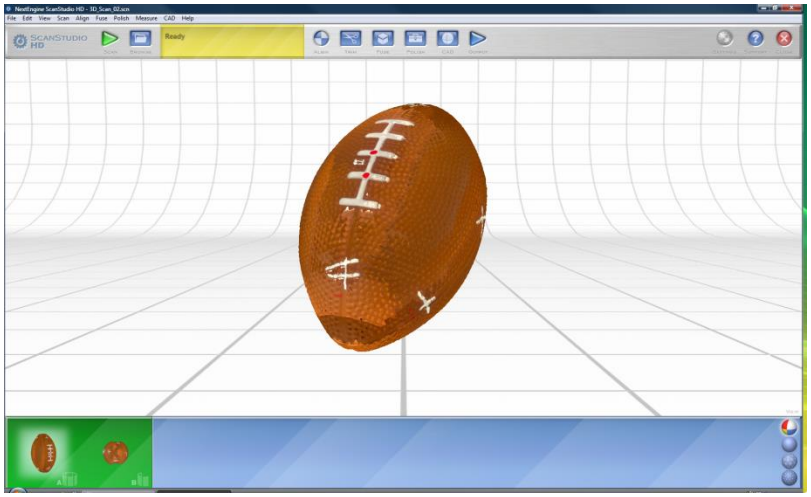


7. Select: Family B | Fixed



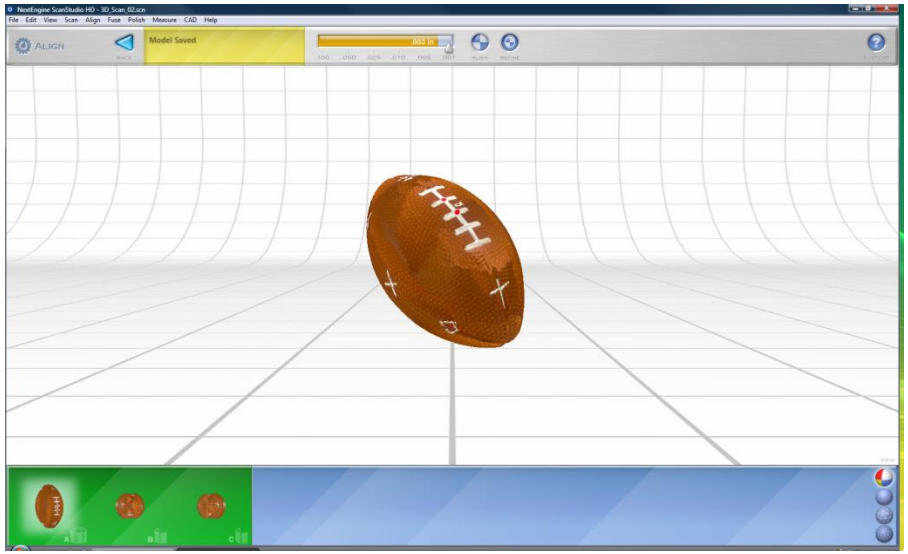
Note: If things still don't look aligned, try re-aligning the individual family scans. Try the following:

1. Select different locations for the pins
2. Add a pin to the selection set

Results	

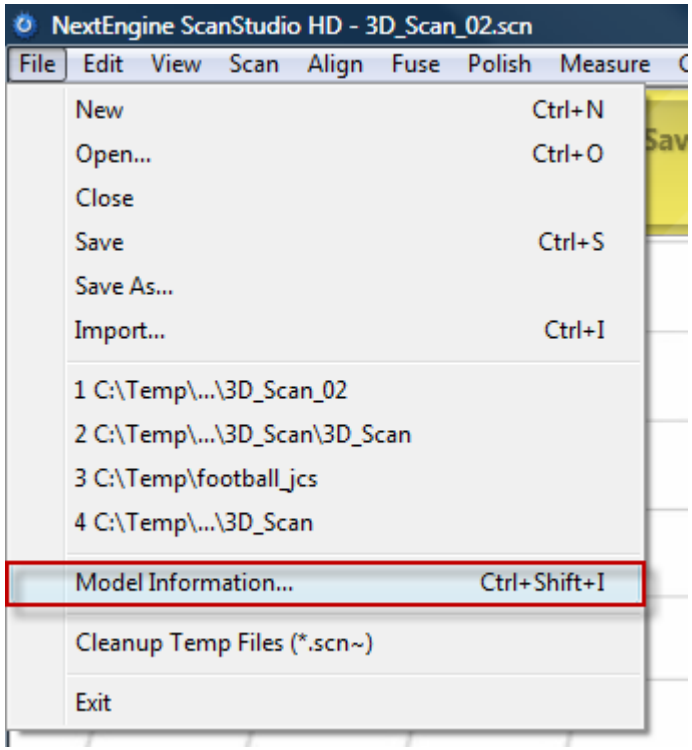
Repeat the process for the other end of the football

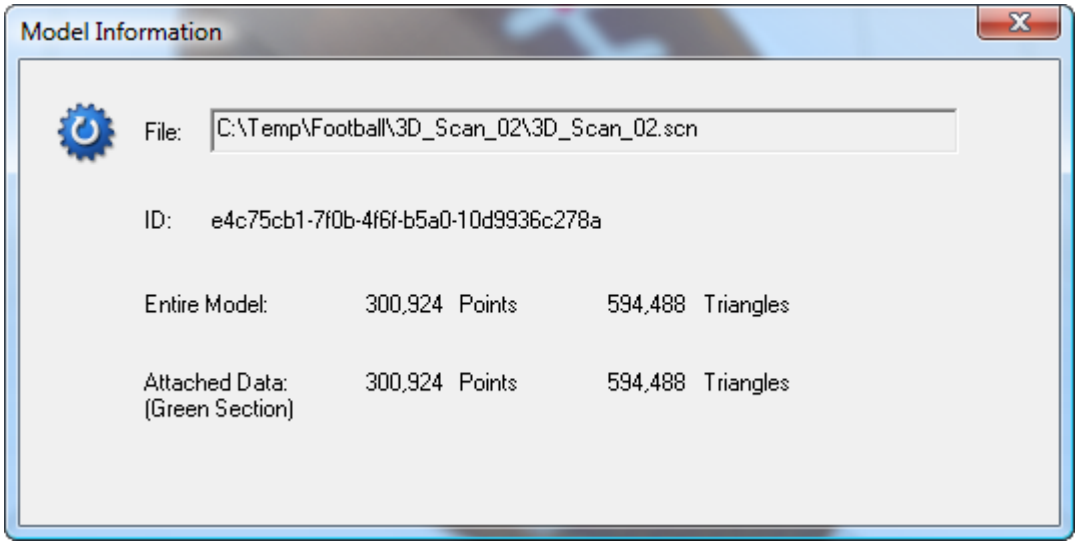
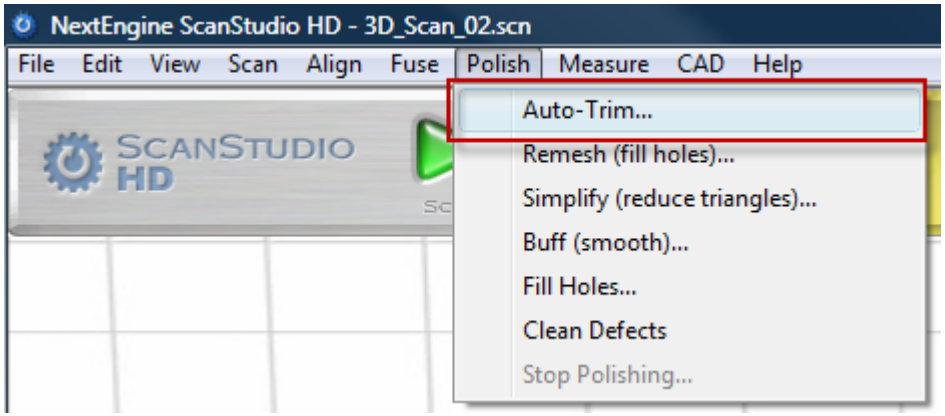
1. Scan: Bracket Scan
2. Trim
3. Align this family to the previous familys.



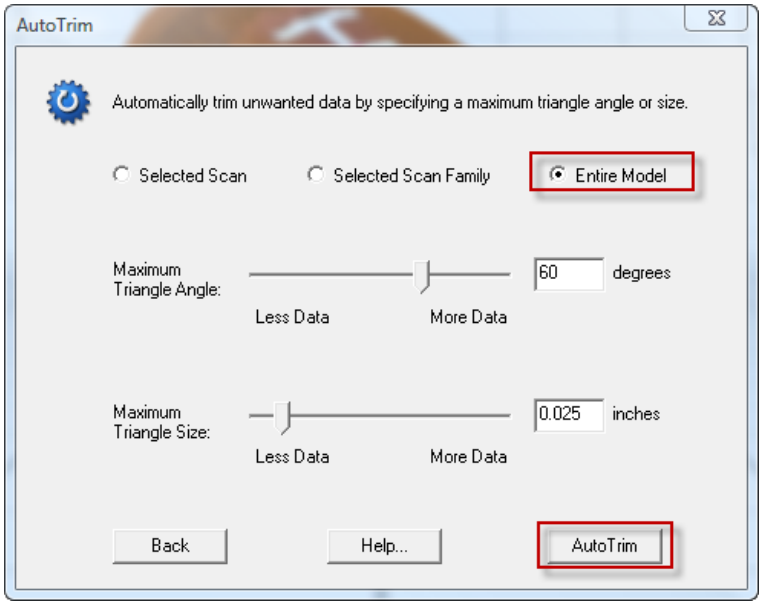
Fuse

1. Select: File: Model Information



2. Check the point Count: Size is appropriate for continuing. Note: Support information provides suggestions for large models.	
3. Select: Polish | Auto-Trim (Probably not required)	

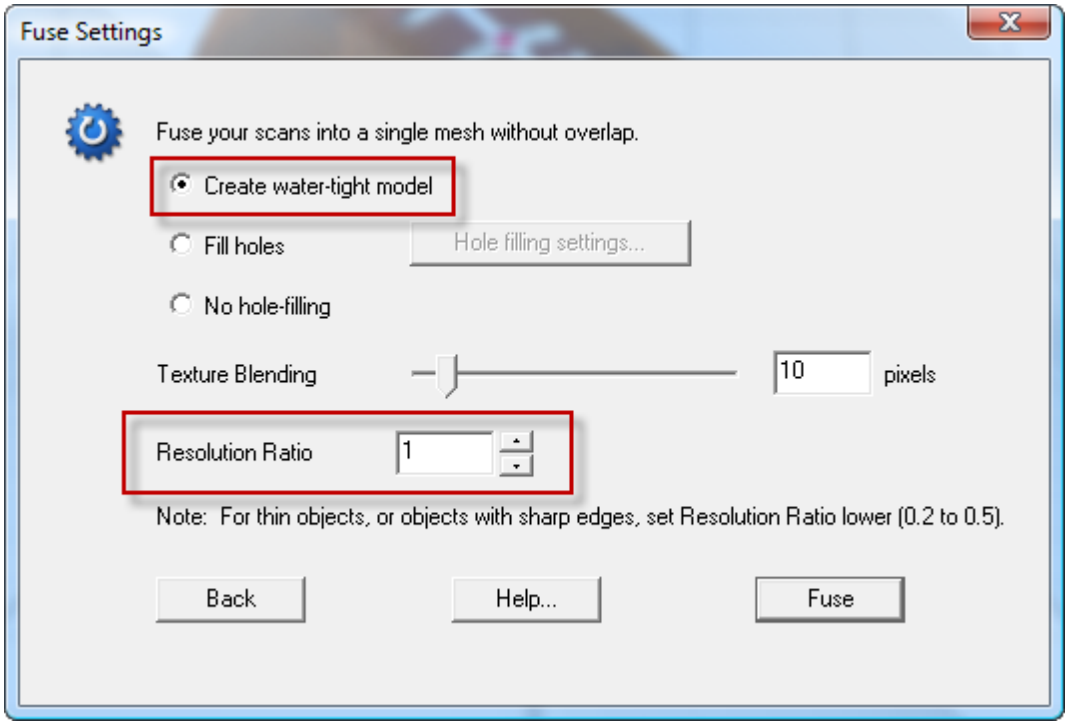
4. Select: Entire Model | Auto-Trim

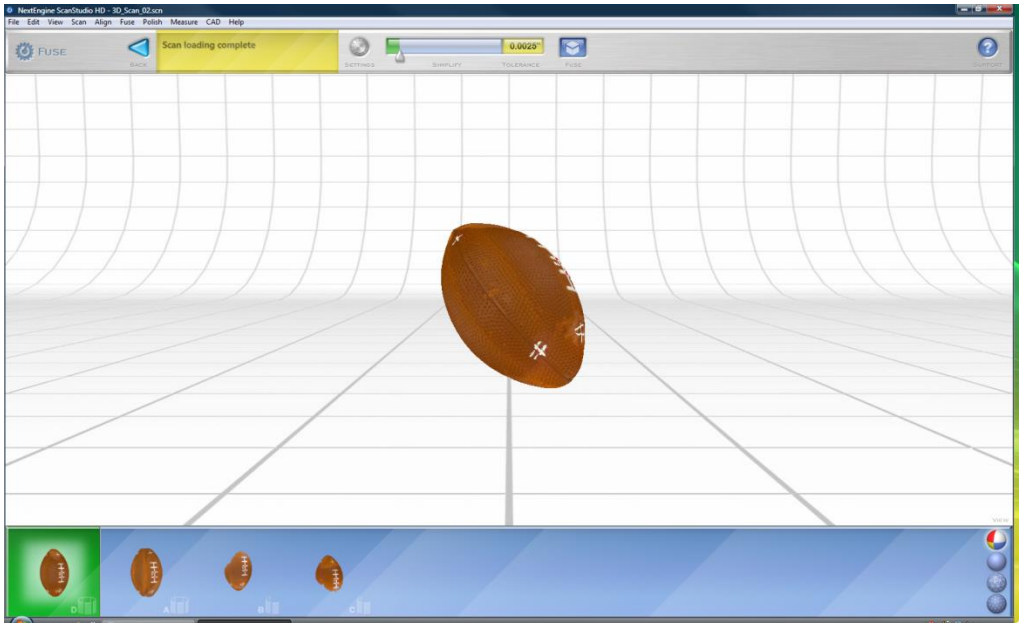


5. Select: Fuse 

6. Select: Settings 

7. Select: Create water-tight model
8. Set: Resolution Ration= 1

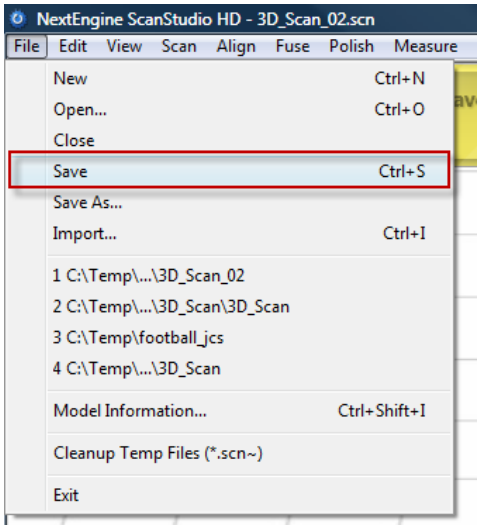


Results	 NextEngine ScanStudio HD - 3D_Scan_02.scn File Edit View Scan Align Fuse Polish Measure CAD Help FUSE Scan loading complete 0.0029

Save

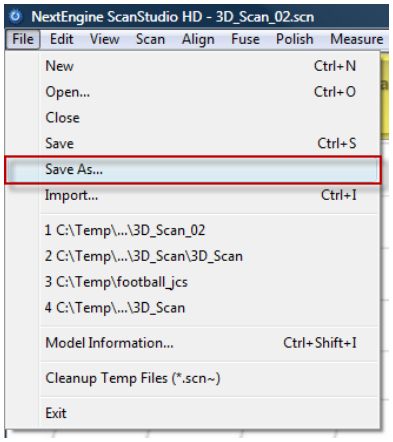
1. Select: File: Save

Note: Saving Frequently is recommended



2. Select: File | Save-As

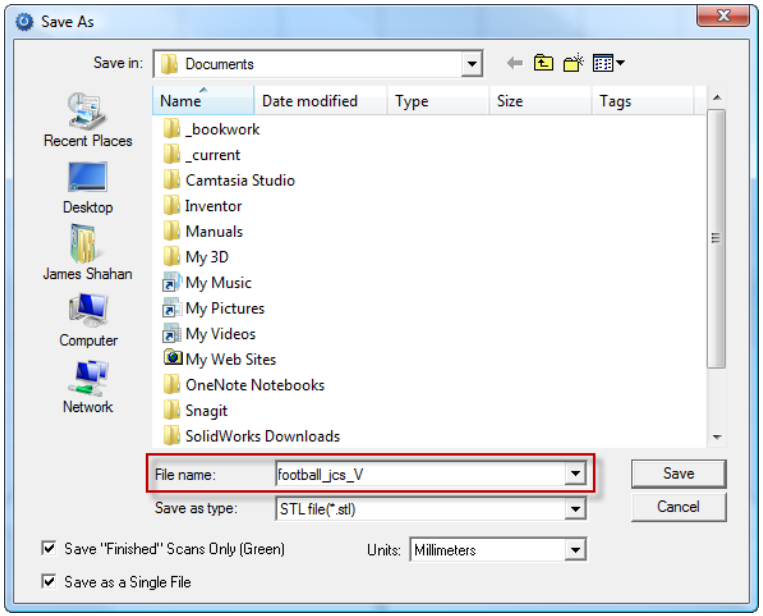
Note: Support information provides suggestions for large models.



3. Select: Save as type: .nzip

Notes:

- This file contains all of the compresses and save all of the required information in a single file. This is the only file that has to be saved for future use.
- Copy this file to an alternate location (backup)
    - Highly Reccomended

4. Select: File | Save-As 5. Select: Save as type: .stl Note: • Possible use of units • Select: Binary	

Finish / File management

1. Make sure the final files(nzip) are copied to a back-up location. 2. Clean-up / delete other files.	