



Tutorial

[www.unic-vision.com](http://www.unic-vision.com)

## Group 1 :

### 1.File

Left click on the (File) button to open a submenu 2

## Submenu 2 :

### 1.Open Dicom Dir.

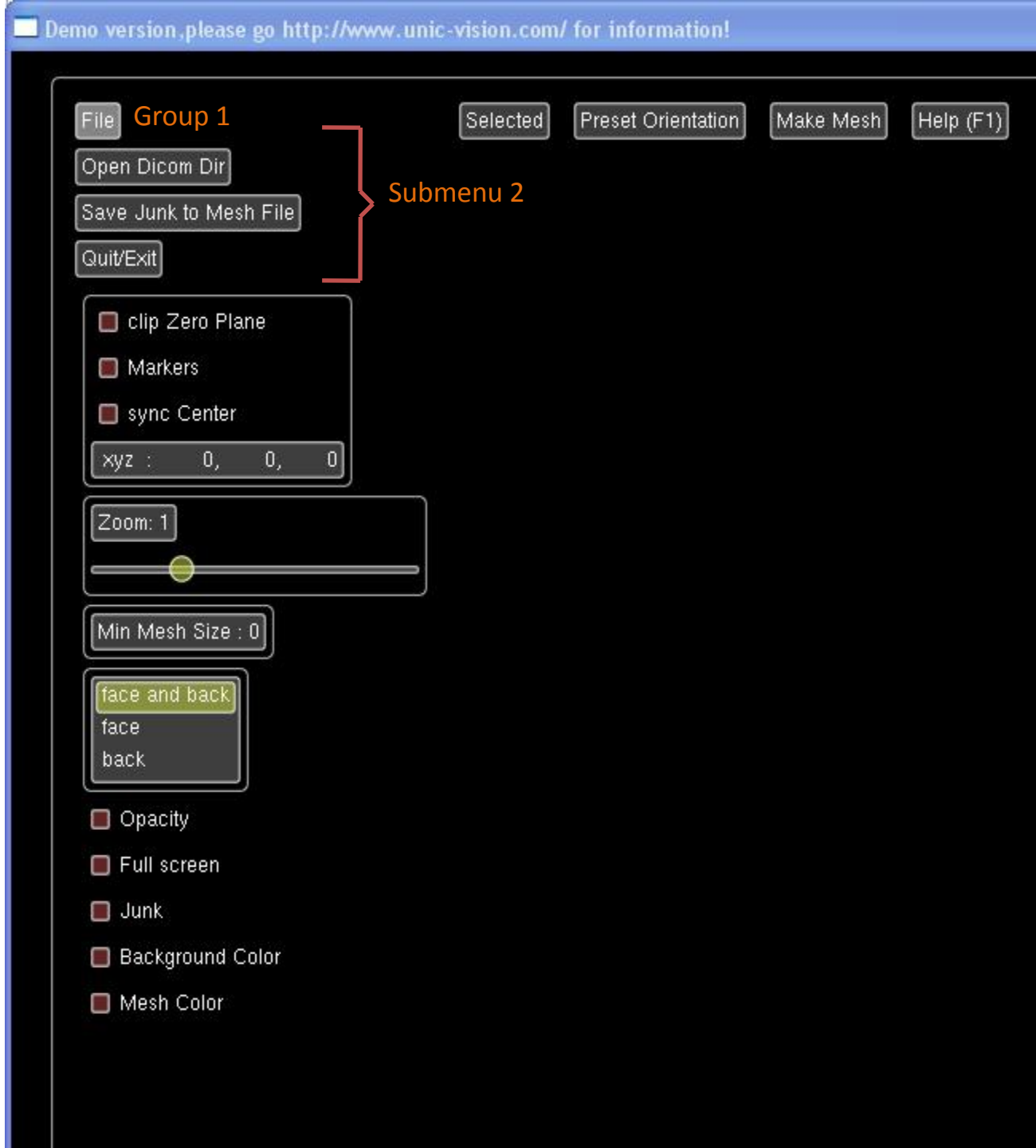
### 2.Save Junk to Mesh File.

### 3.Quit/Exit.

**Button 1** (Open Dicom Dir ), Left click on the (Open Dicom Dir) button to open a submenu that allow to find and open dicom files.

**Button 2** Left click on the (Save Junk to Mesh File) to save all data from junk to (.X) file.

**Button 3** Left click on the (Quit/Exit) to close application.



## Open Dicom Dir submenu

**Group 1** show drives in the system.

Selecting one of the drive button with left mouse key will change your destination drive.

**Text box number 2** shows the location on DIT.

**Group number 3** Directory Information tree (DIT) .  
Left click on button (..) will return you to one step back in the directory tree.

**Group number 4 :**

1. **Check box Reject** checked -> load only axial slices.
2. **Check box MergeAcc** checked->allow to open other dicom files.

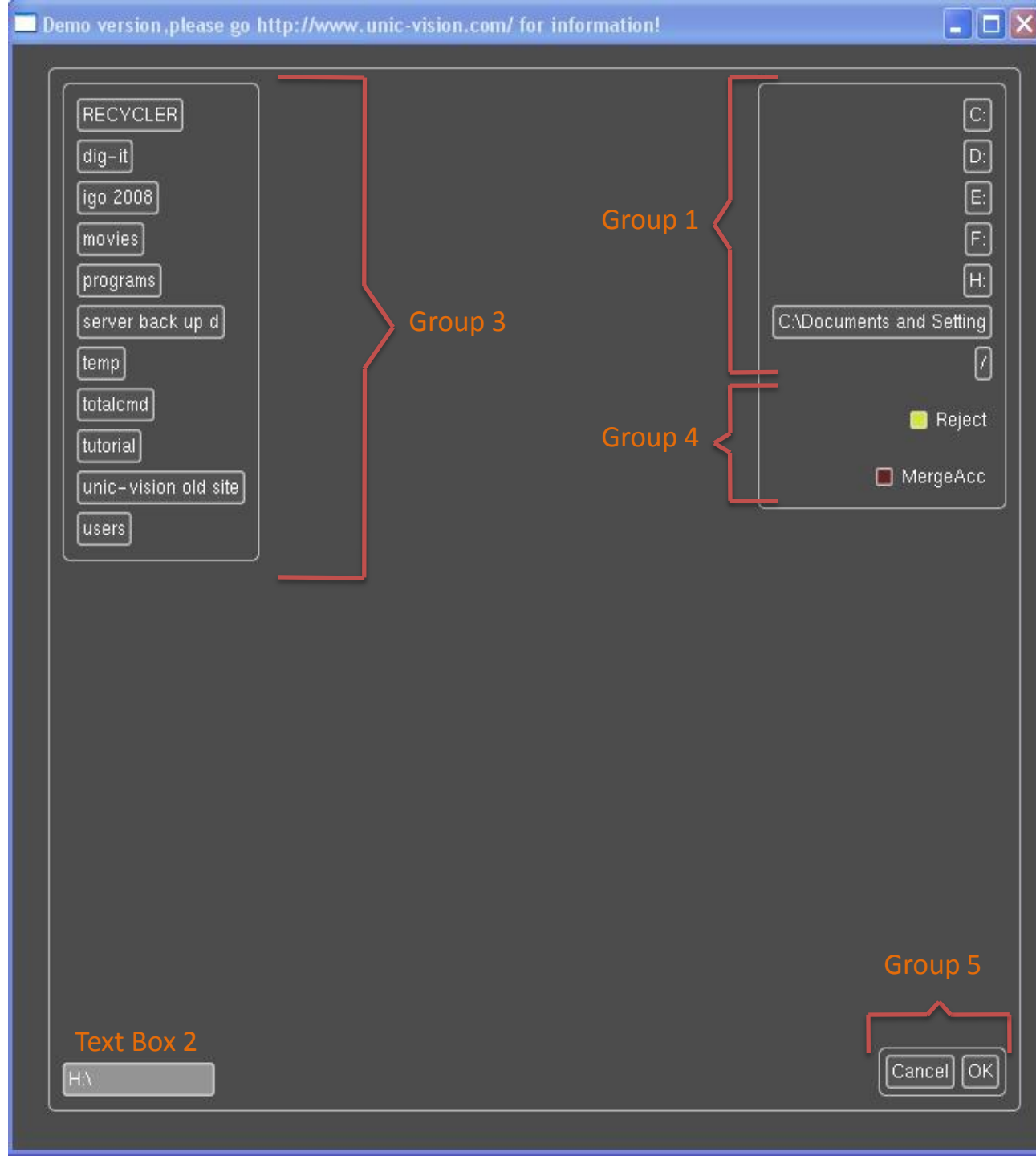
**Group number 5 :**

Left click on button (**Cancel**) will return you to the main menu.

Left click on button (**OK**) to accept your choice .

### To load dicom files:

1. In the main menu left click on (**Open Dicom Dir**) button .
2. Choose destination drive from (**group 1**) .
3. Find directory that contained dicom files from group 3 (**directory information tree**).
4. Left click(**OK**) to accept your choice.



### Group 1:

- 1.Window
- 2.Level

#### To choose Window and Level value:

**Option 1:** Left Click on (Window / Level )button, on the ruler that opened, left click on yellow circle and drag it to the (left/right) to change the value.

**Option 2:** Click on mouse middle key (roller) on the image area and move mouse (up /down) to change level value, (left/right) to change window value.

**Option 3:** Left click on (Preset WL), at the opened menu choose (Window / Level ) preset.

### Group 2:

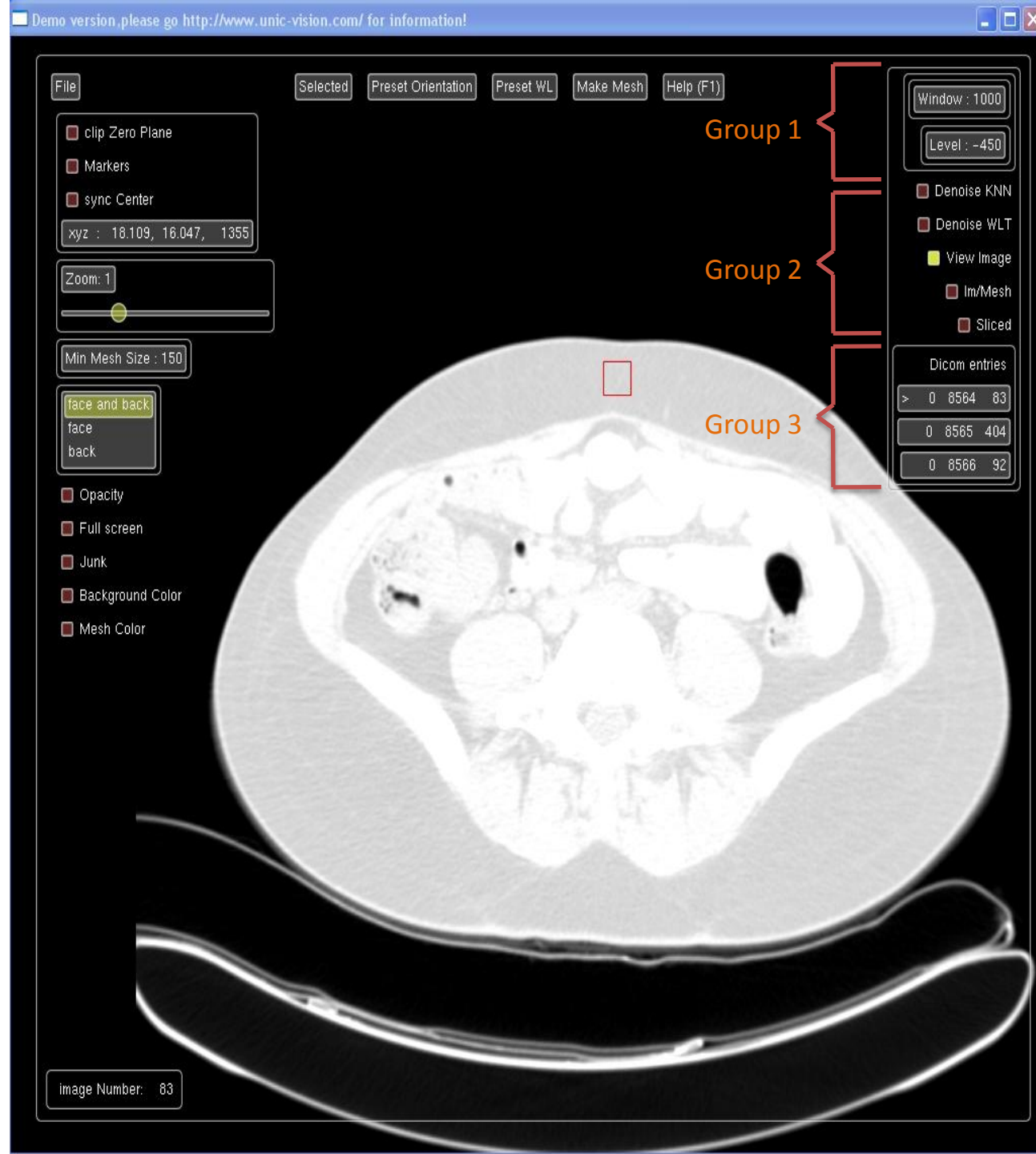
- 1.Denoise KNN
- 2.Denoise WLT
- 3.Wiev image
- 4.Im/Mesh
- 5.Sliced

#### To use Denoise KNN filter:

1. Left click on check box (Denoise KNN),
- 2.Choose (Noise factor/Kernel size) by click with left mouse key on the yellow circle and drag it (left/right) to change value.

#### To use Denoise WLT filter.

- 1.Click on check box (Denoise WLT),
2. Choose (Noise factor/Low/Level) by click with left mouse button on the yellow circle and drag it (left/right) to change value.



### Group 3 Dicom entries :

1 to n depend on entries quantity.  
In this example its three.

### To choose Entries:

On each button there are 3 numbers ,( left, middle, right ). The right number show quantity of dicoms in this entry. To choose the wanted entry left click on the button. The sign (>) show current entry.

### Group 4 :

Left click (Make mesh) to open submenu

- 1.Lung
- 2.Bones
- 3.Current(Enter).

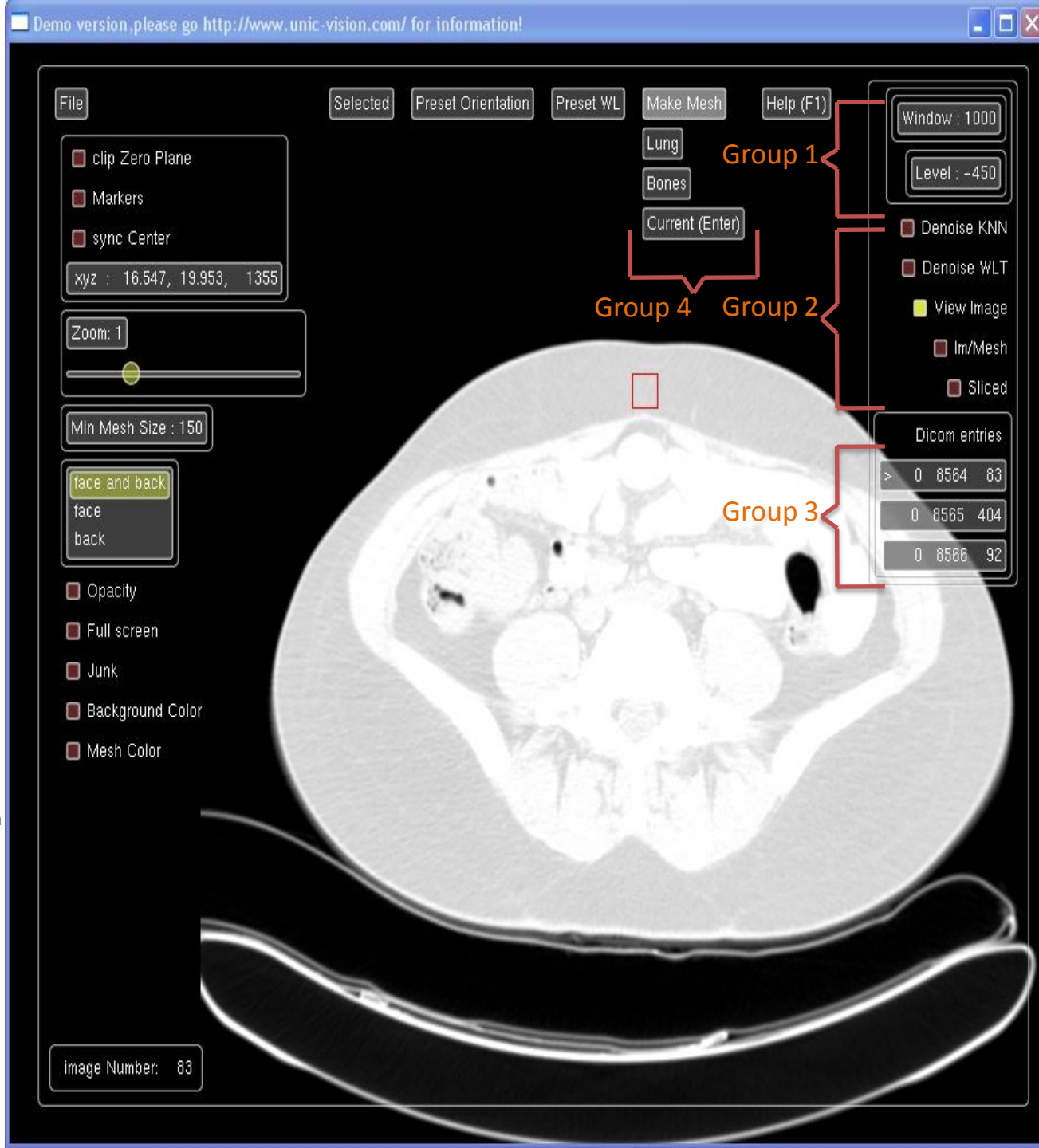
### To make mesh:

**Option 1:** Choose thresholds by setting (level/Window) value, click on the (Make Mesh) button, in the opened menu click on (Current(Enter)) button or just click (Enter) on keyboard.

**Option 2:** left Click on the (Make Mesh) button, in the opened menu click on preset (Lung, Bones) button.

Left click on (lung) button in order to see 3D lungs or 3D Colon (virtual colonoscopy).

Left click on (Bones) button in order to see 3D skeleton or 3D vessels(CTA computer tomography angiography).



## Group 1 :

- 1.Size
- 2.Triangels
- 3.Selected
- 4.Sel object coordinates
- 5.Image number

To receive all group 1 information, right click on 3d object .

**Size (X,Y,Z)** show x,y,z dimensions of the clicked object in mm.

**Triangles (number)** show number of triangles on clicked object.

**Selected (number)** show name of each object.

**Sel object coordinates (X,Y,Z)** show clicked object coordinates .

**Image Number(number)** show clicked object slice number.

## Group 2 :

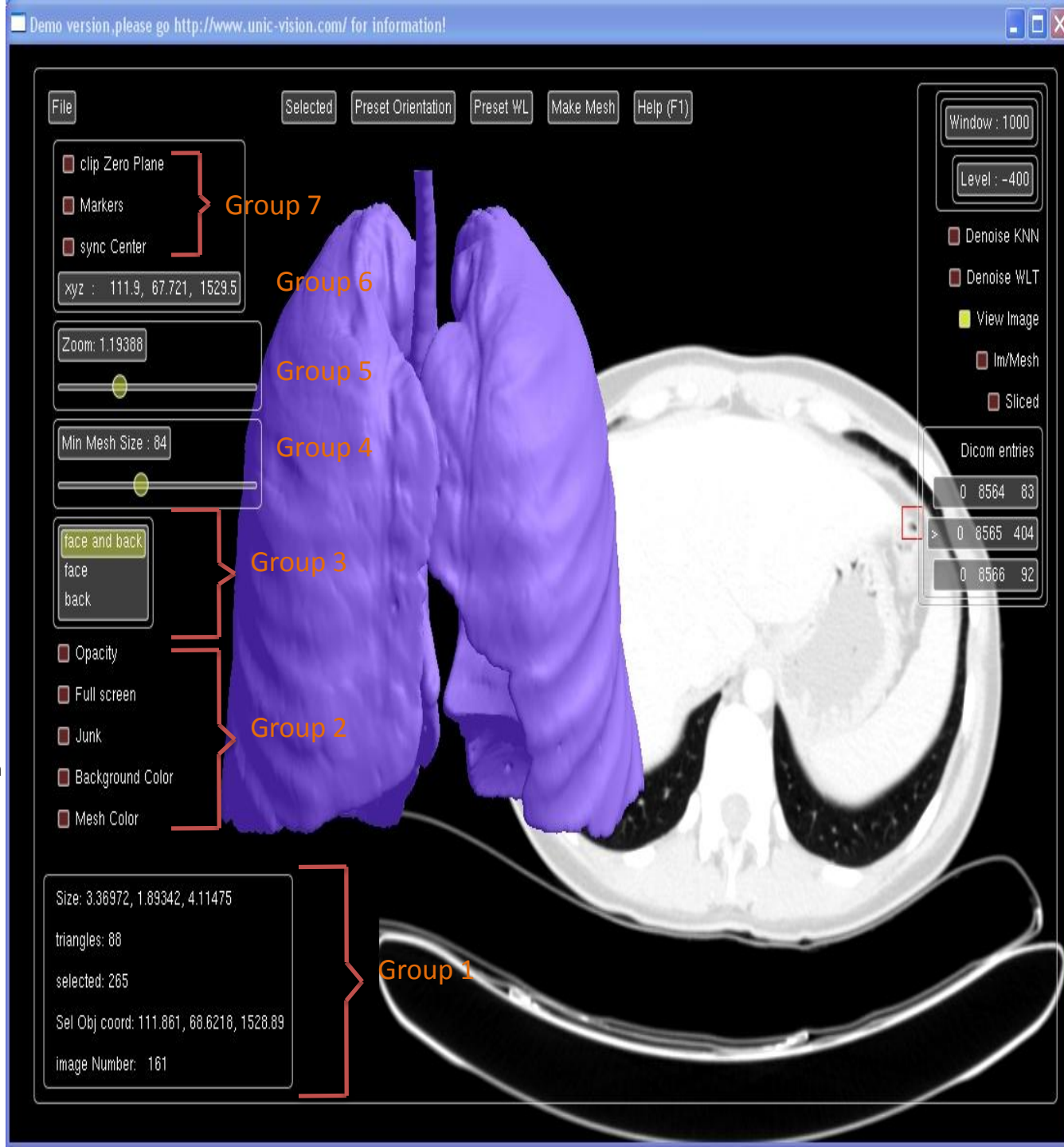
- 1.Opacity
- 2.Full Screen
- 3.Junk
- 4.Background Color
- 5.Mesh color

left Click to check boxes.

**Opacity** -> right click on object then left click on opacity or Letter (O) on keyboard and clicked object will be transparent.

**Full Screen** -> left click on (Full Screen) or letter(F) on keyboard to expand program to full screen mode.

**Junk**-> in order to send object to junk, right click on the object and click button(Del/Delete/D) on keyboard, the command will send this object to junk. Left click on junk checkbox to see previously deleted items.





### Group 3 :

- 1.Face and Back
- 2.Face
- 3.Back

Left click on 1 of 3 buttons.

- 1.Button (face and back) show the face side and back side of the triangles.
- 2.Button (face) show the face of the triangles.
- 3.Button (back) show the back of the triangles.

### Group 4 :

- 1.Button (Min mesh size) allows to choose what minimum size of mesh object the program will show.

Left click mouse button on yellow circle on the opened ruler and drag mouse (left/right) to change the value.

By default min mesh size value is 150 triangles.

### Group 5 :

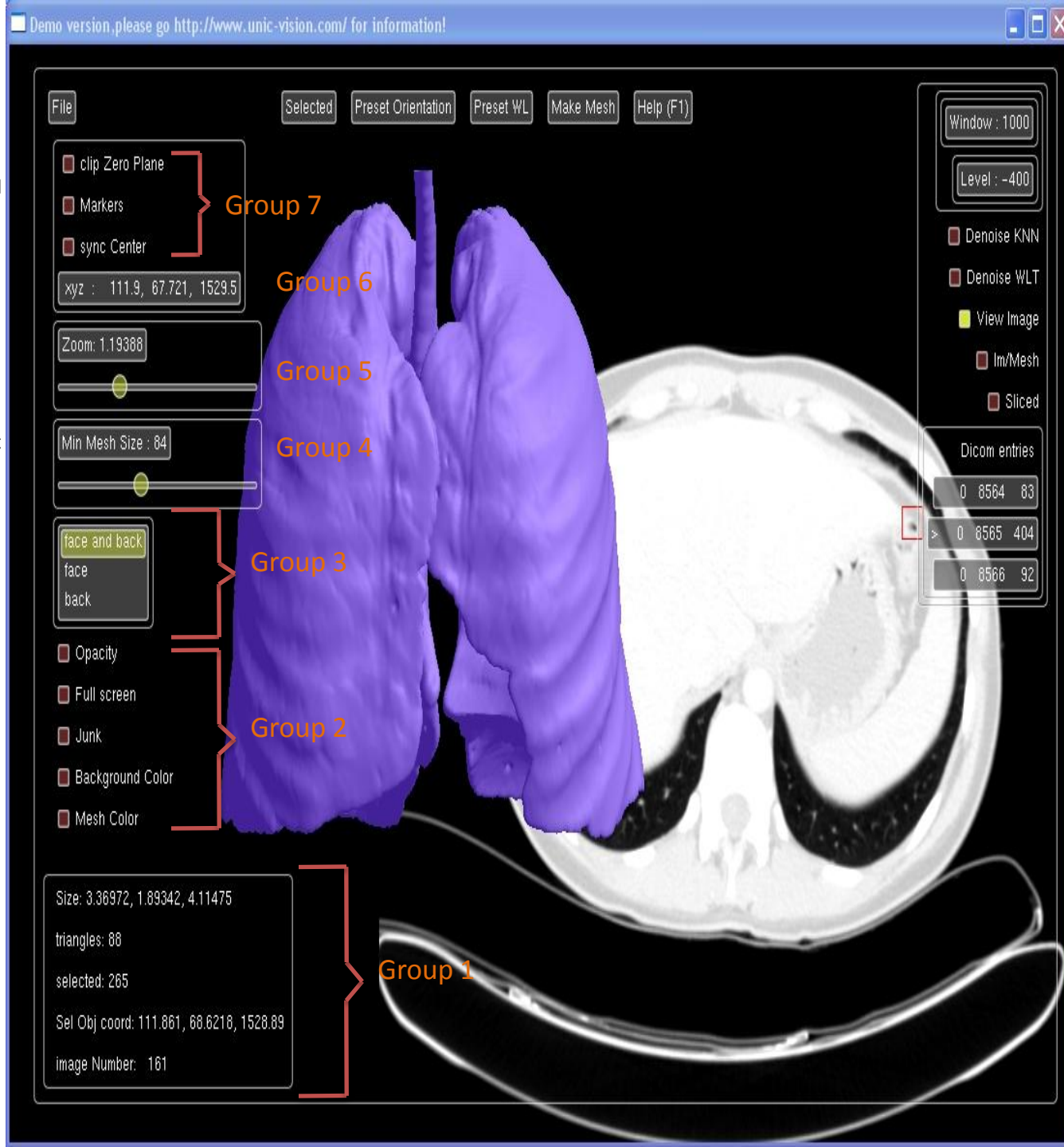
- 1.Zoom button.
- 2.Zoom ruler.

Left click on the zoom button/ruler.

1. left click on (zoom) to reset zoom value to default (1).

Two options to do zoom in/out.

- 1.Left click on the zoom ruler and drag mouse (left/right) to zoom (in/out)
- 2.Hold (shift) button then left click on the object and drag (up/down) to zoom (in/out).



### Group 6 :

- 1.Button (xyz)
- 2.Text box (x)
- 3.Text box (y)
- 4.Text box (z)

Text box x,y,z show coordinates of current marker.

**Left click on XYZ will activate 3 rulers**

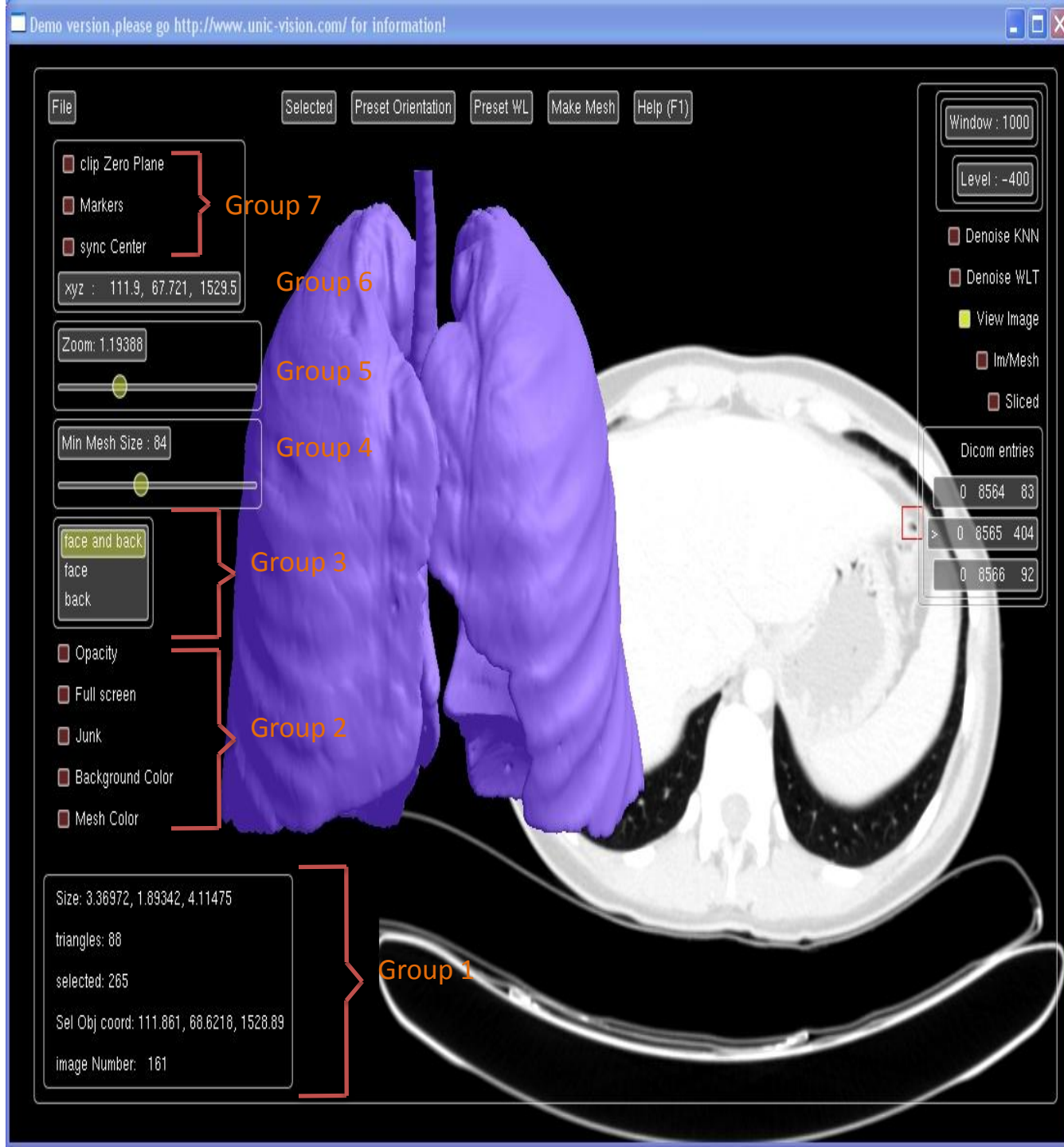
- 1.Ruler (x) to change marker coordinates on axis x.
- 2.Ruler (y) to change marker coordinates on axis y.
- 1.Ruler (z) to change marker coordinates on axis z.

### Group 7:

- 1.Clip zero plane
- 2.Markers
- 3.Sync Center

**Left click on markers will open marker menu:**  
**Show 4 Buttons:**

1. **To add marker** : right click on the wanted area and then click on (add marker) button or letter (V) on the keyboard. This will create new marker. The new marker will contain marker name and distance to center marker.
2. **Remove marker left** :click on (Remove marker) will erase current marker.





3. **To marker:** Left click on the desired marker then click on button (To marker) to see the desired marker. Click letter (A) on the keyboard to switch marker.
4. **Center :=Mesh Center** click on this button (Center :=Mesh Center) center will be the mesh calculated center.
- Sync Center** left click (Sync Center check box), Right click on the object wanted area to make this area the new object center.

#### Group 8 :

Left click on (Selected) will open submenu:

1. Move selected to junk
2. Move out of selection to junk
3. Move out of screen to junk
4. Deselect

#### Right click on 3d object.

1. **Move selected to junk :** right click on object to select, then left click (Move selected to junk) or letter (D) on keyboard or button (Delete) on keyboard to move selected object to junk.

#### 2. Move out of selection to junk:

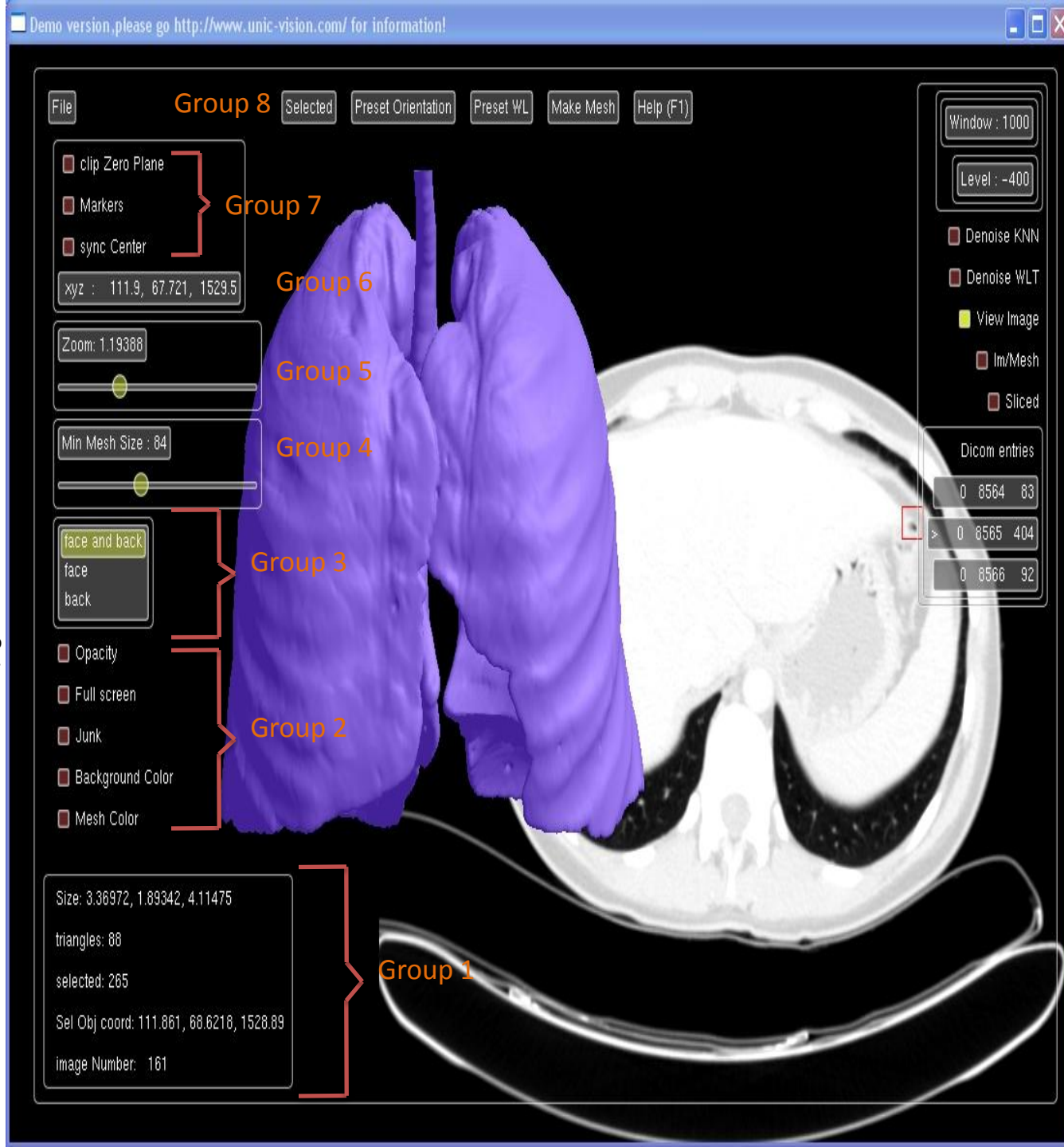
Right click on object to select it, then left click on (Move out of selection to junk) or on keyboard (CTRL+S) to move all objects out of selection to junk.

#### 3. Move out of screen to junk :

Left click on (Move out of screen to junk) or on keyboard (CTRL+D) to move all objects out of screen to junk.

#### 4. Deselect :

left click (Deselect) or (Esc) keyboard button to deselect the selected object.



### Group 1 :

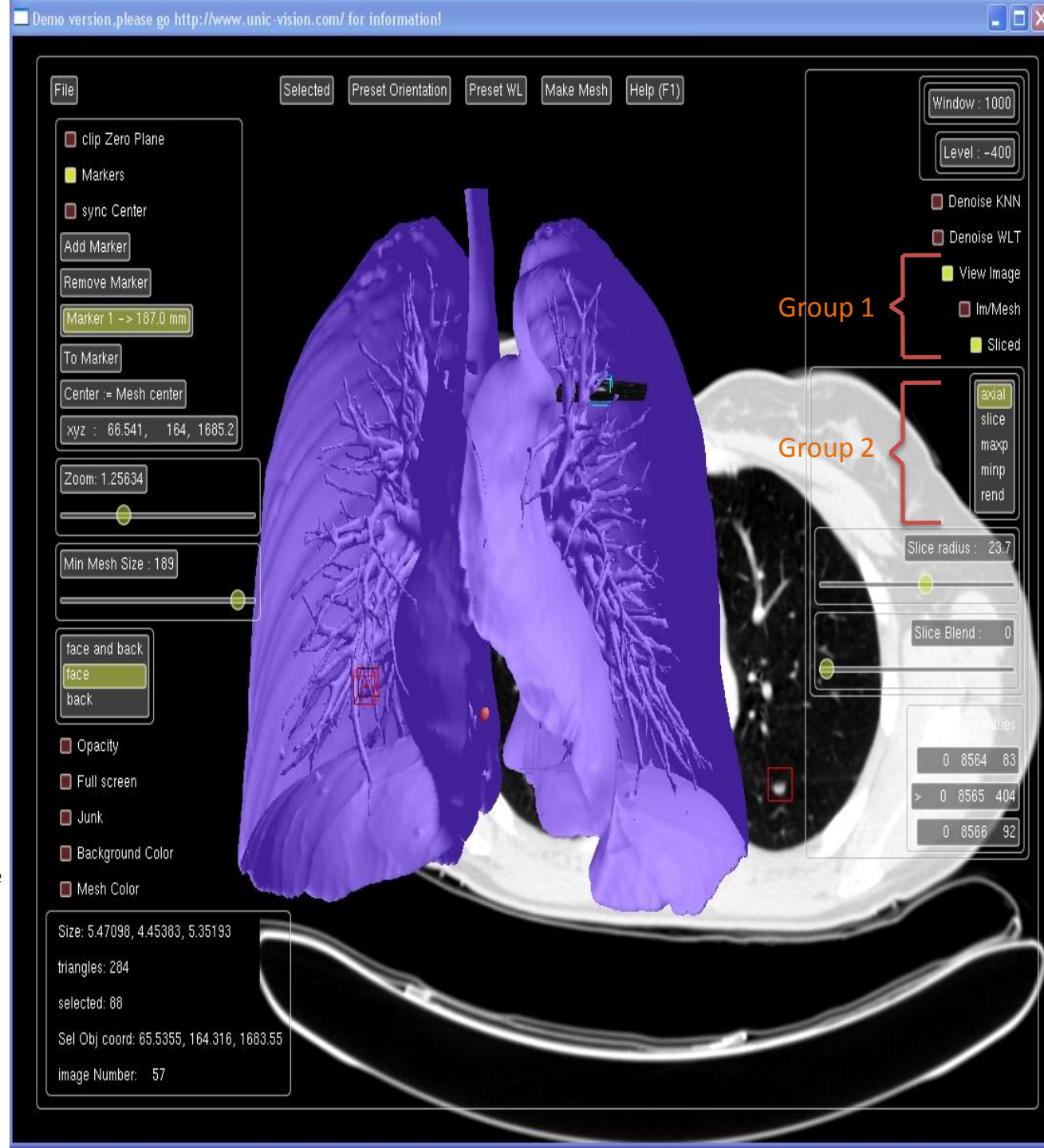
1. View image
2. Im/Mesh
3. Sliced

1. **View image** :click with left mouse button on (View image) button will hide axial image.
2. **Im/Mesh** : left click on (Im /Mesh) will bring axial image to front.
3. **Sliced** :click with left mouse button on (Sliced) or press (Space) button on keyboard will open submenu 2.

### Submenu 2 :

1. Axial
2. Slice
3. Maxp
4. Minp
5. Rend

1. **Axial (default)** left click on axial button will open new window on the last clicked area . (Slice radius ruler) will change the window radius .  
Left click on the yellow circle and drag it ( left/right) to change the value.
2. **Slice=MPR** multi planar reconstruction.
3. **Maxp=MIP** maximum intensity projection.
4. **Minp=minMIP** minimum intensity projection.
5. **Rend** create the rendering preview in the last clicked area with present window/level value (threshold).



### Additional options:

1. **CTRL+left mouse click on object**  
allow to move mesh free on the screen.
2. **CTRL+right mouse click on object**  
select center of mesh object.
3. **SHIFT+left mouse click on object**  
scale.
4. **Mouse middle button (roller) spin.**  
forward, backward axial images sequence.
5. **Mouse left button click on object.**  
rotate the object.
6. **Axial image (next/prev)**  
PageUp/Down ArrowUp/Down.
7. **Tab** Image bring to Front/Back.
8. **I** Image ON/OFF
9. **N** Image denoise ON/OFF
10. **L** Switch central sphere view mode
11. **Space** Central sphere view mode ON/OFF
12. **F1** Help window
13. **F2** View junk window ON/OFF
14. **F** Full screen ON/OFF
15. **Q** Exit from program
16. **Enter** Make mesh with current W/L
17. **S** Auto Sync center to marker
18. **M** Marker ON/OFF
19. **A** Switch marker
20. **C** Center = Current marker
21. **V** Add new marker
22. **CTRL+D** move all meshes out size of screen to junk
23. **CTRL+S** move all meshes outside of selected mesh
24. **D** Move selected to junk
25. **O** View mesh half transparent ON/OFF
26. **Z** Truncate meshes by zero plane  
**ON/OFF**
27. **P** Switch mesh polygon mode
28. **Esc** Deselect current mesh
29. **0** Reset all
30. **1** Reset rotation/translation





## Contact us

Please, send any comments, bug reports and ideas to improve Unic-Vision !  
We would like to know if you want more features?  
Use this email ([info@unic-vision.com](mailto:info@unic-vision.com)) to contact us to get more information about  
our company, products, or services.

**Thank you for your interest in Unic-vision!**

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