2 INITIATION TO GiD

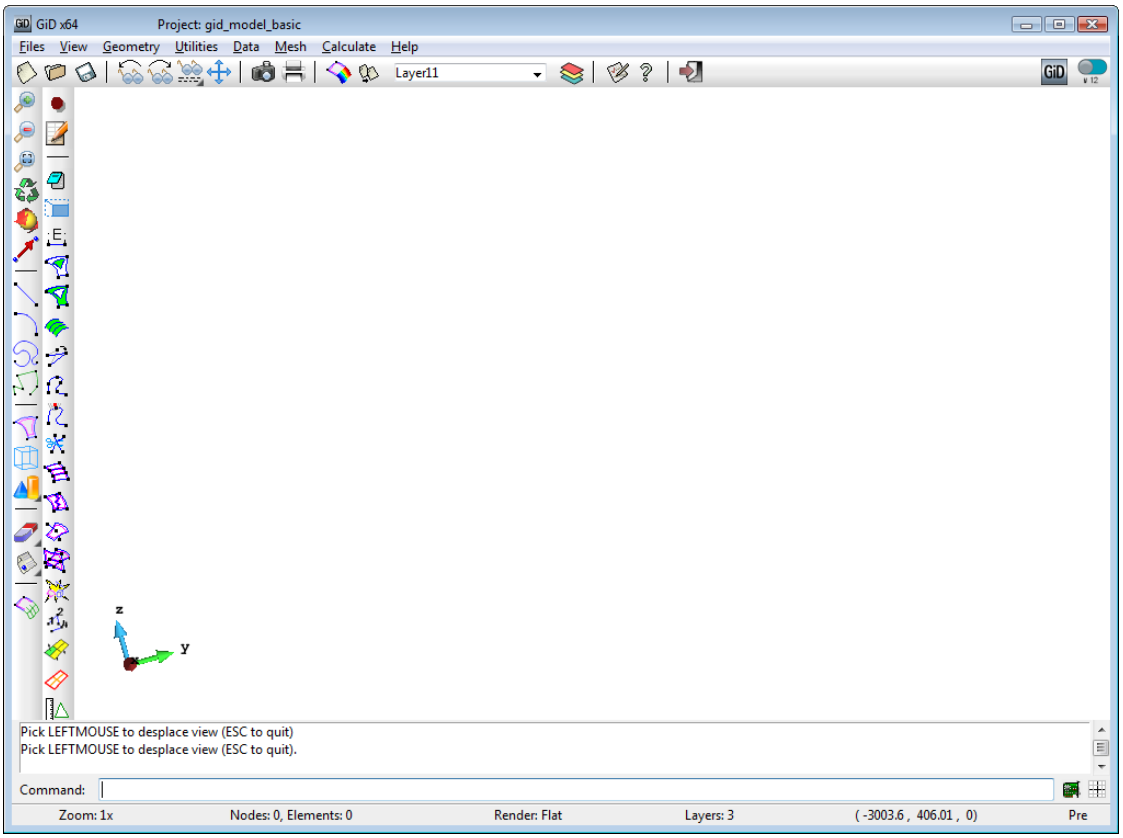
The philosophy of this tutorial is to get familiarized with GiD: how to change the views of the model, how to manage the Layers, and other basic features. Some of this features are both in the preprocessing and the postprocessing parts of GiD, although the examples shown are from the preprocessing one.

Many times the text will make reference to 'entities'. Almost all the options explained in this tutorial are valid both for geometrical and mesh entities, although the examples used are often geometrical ones.

The topics in this tutorial are further explained in the **Reference Manual**. We have selected some of the basic features to give to the user some basic tips to start working with GiD and make the rest of the tutorials.

2.1 User interface

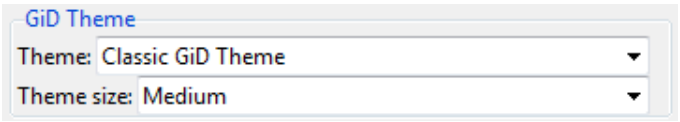
For further information about GiD user interface please consult the General aspects->User interface section in the **Reference manual**.



2.1.1 Change theme

User can choose between Classic and Dark themes, which change drastically the GUI appearance. User can also choose between some icon sizes in each theme.

These options can be changed in **GiD Theme** option inside **Utilities->Preferences->Graphical->Appearance** tab.



2.1.2 Warnline

In some of the operations made in GiD by the user, GiD gives information about what is expected to do by the user. This information is very useful the first times GiD is used as a guideline for the user.

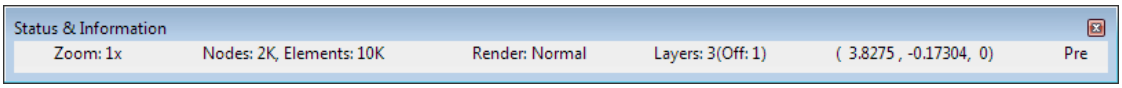
The place were GiD shows this kind of information is the lower part of its main window.

2.1.3 Command line

Using GiD, sometimes the user is asked to introduce data with the keyboard. The 'Command line' must be used for this purpose. It is placed in the lower part of GiD window.

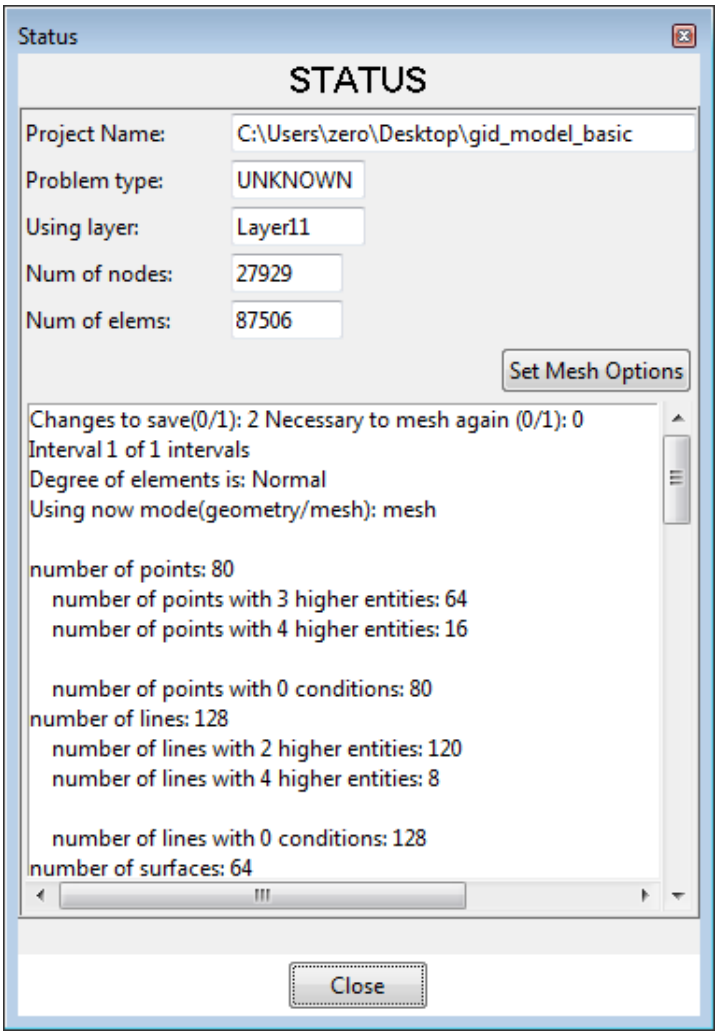
2.1.4 Status bar

The Status & Information bar located at lower part of GiD's Window, provides basic information at a quick glance.



From left to right you can find:

- Zoom factor
- Current number of nodes and elements (Click to acces to Status Window)

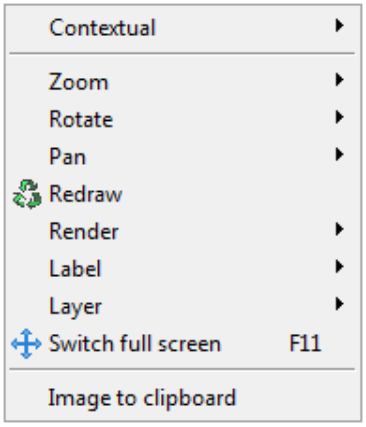


- Current renter mode (Click to change render)
- Number of layers in Pre, number of sets in Post
- Mouse coordinates (Click to open "Coordinate window" in Pre and "Change result units" in Post)
- Current Mode: Pre or Post

2.1.5 Contextual menu

Clicking the right-mouse button on GiD a popup menu will appear with options related to the clicked object.

When picking the main drawing space, on the top appear **Contextual** that is filled with different commands depending on the current GiD state, e.g. when asking for a point they appear options like "Point in line", to select a point over a line, or "Arc center" to select the coordinates of the center of an arc.



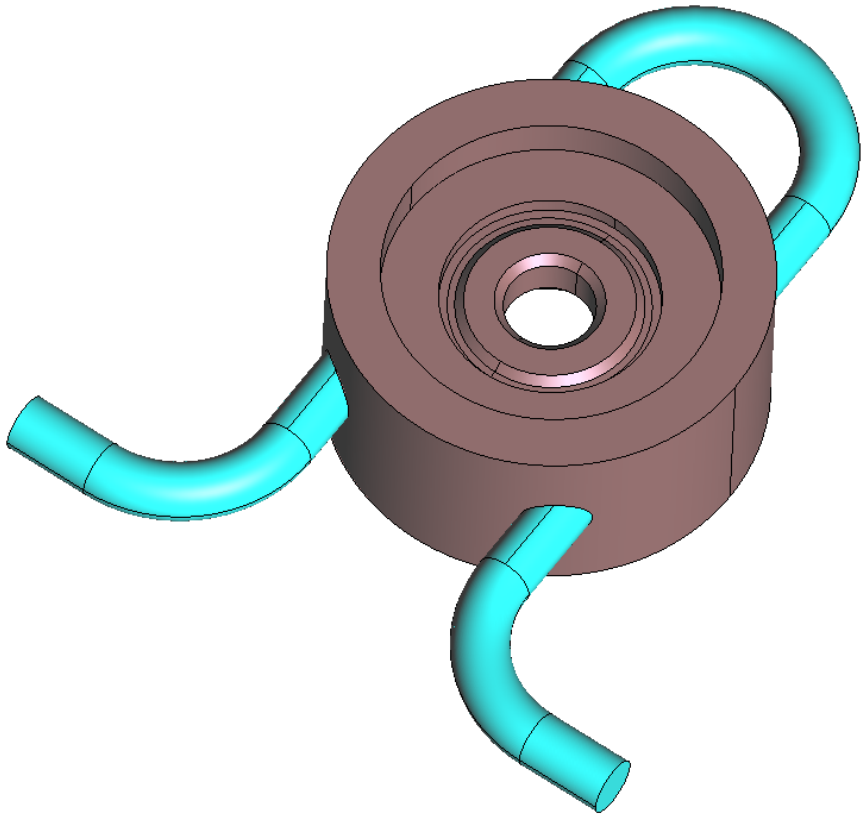
2.1.6 Escape function

An important thing a GiD user should know as a general philosophy of use of the program is the **Escape** key functionality: In almost all the actions performed by the user, to declare the action as done the user should press **Escape** key (or press the center mouse button).

2.2 Load a model

In the **Files** menu user can find the typical operations for managing the GiD projects like save a project, open an existing project, import and export files, print or quit the program. Most of this options are also accessible from the icons toolbar. The corresponding icon is shown in the menu, next to the option.

1 . Click on **Files->Open...** and select the GiD model **gid_model_basic.gid**. GiD also can load a model just with **drag & drop**.The following model should be loaded:

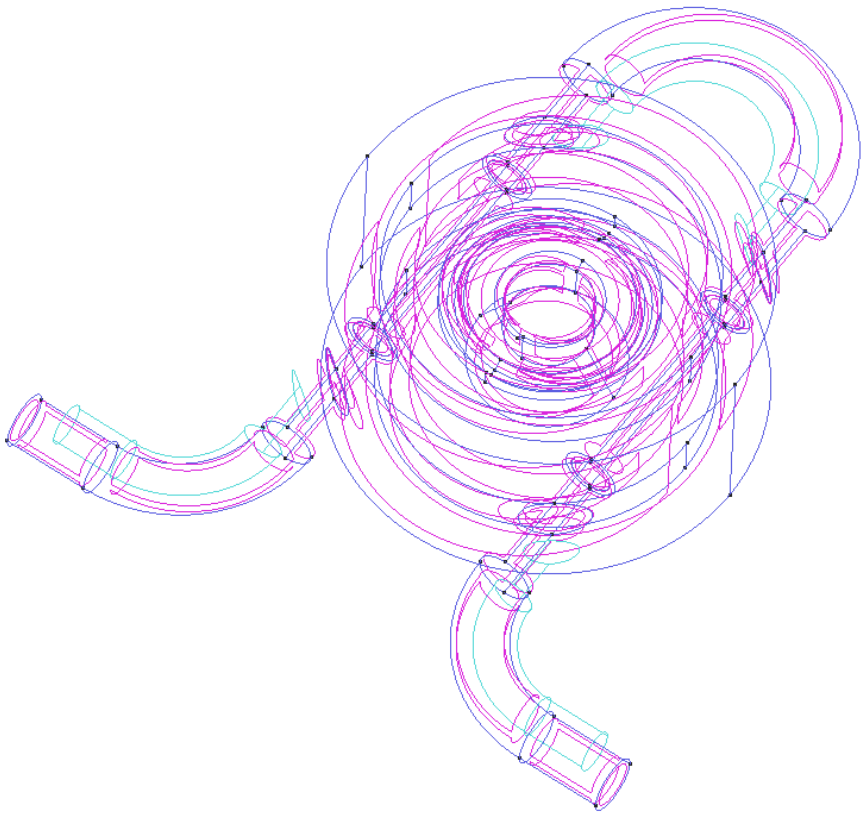


2.3 Render modes

In the **View** menu user can find the **Render** options. They are also accessible from the right mouse button and the status bar.

1 . Select **View->Render->Normal**

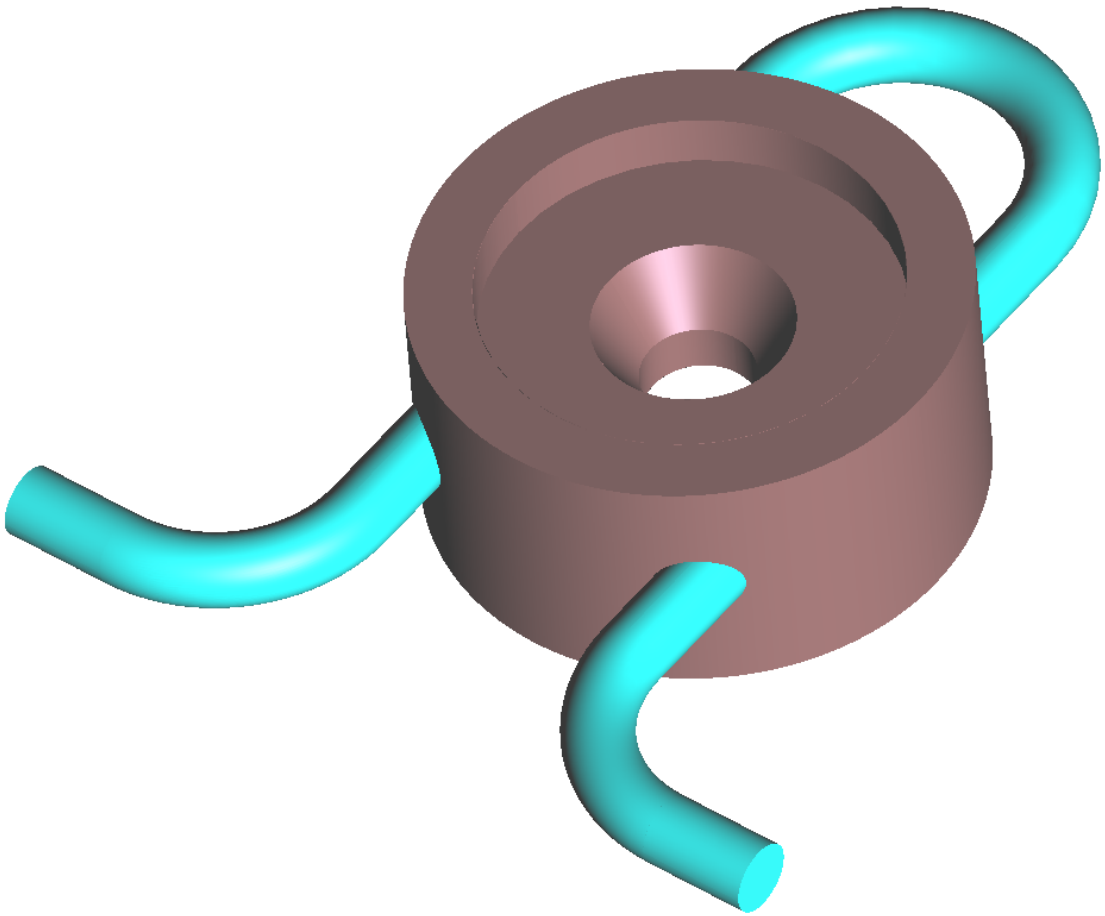
In **Normal** render mode, user can see the entities drawn in different colors, depending on the kind of entity: volumes in light blue, surfaces in pink, lines in blue, and points in black, as it can be seen in the following figure:



2 . Select **View->Render->Flat**

3 . Select **View->Render->Smooth**

Flat render mode draws each geometrical entity using the colour of the layer it belongs to, and **Smooth** mode uses also this criterion, but lines are not drawn to represent the geometry in a smoother way. The following figure shows the visualization of the model using 'Smooth' render mode:



2.4 Change views of the model

In the **View** menu user can find the options to change the point of view in which the model is shown. Many of these options are also accessible by the right mouse button menu, or the icons toolbar.

2.4.1 Zoom

To zoom in or out the model user can choose the corresponding options in the **Zoom** section of the **View** menu or the right mouse button menu.

A user friendly way of zooming the model is to use the wheel of the mouse, or clicking the center button of the mouse while the **Shift** key is pressed.

To get a view which includes the whole model the **Frame** option must be selected.

The icons corresponding the zoom operations are the following ones:

Zoom in:

Zoom out:

Zoom frame:

2.4.2 Pan

To move the view of the model user must select the option **Pan**. This option is accessible from the **View** menu, the right mouse button menu, or moving the mouse while the

Shift key and the right mouse button are pressed.

The corresponding icon for the pan option is the following one: 

2.4.3 Rotate

In the 'Rotate' part of the 'View' menu (also present in the right mouse button menu) there are the options to rotate the view of the model.

A user friendly way of rotating is to move the mouse while its left button and the 'Shift' key are pressed.

The corresponding icon for rotating the model is the following one: 

2.4.3.1 Set center of rotation

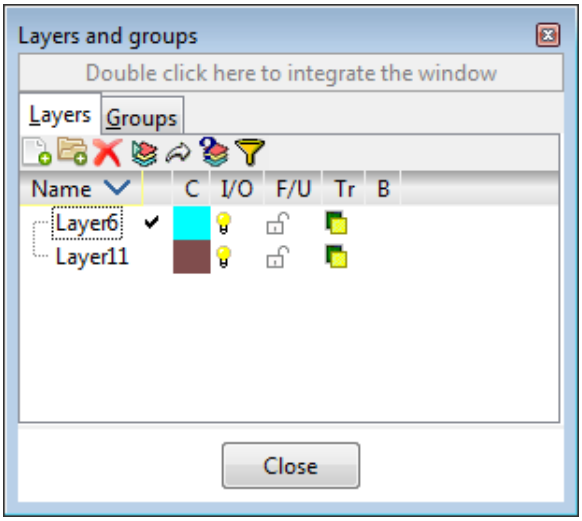
An interesting option for rotating the view of the model is to set the center of rotation. To change it:

1 . Select **View->Rotate->Center** from top menu or **Rotate->Center** from right button mouse menu. Then, the cursor changes into the selection mode.
2 . Select an existing point of the model.
3 . Now rotate the model and check that the center of the rotation is the one selected.

2.5 Layers and groups

A really useful way for organizing the different parts of the model is using 'Layers'.

1 . Open the Layers window by selecting the **Utilities->Layer and groups** option or clicking  in the upper icons toolbar. The following window should raise up:

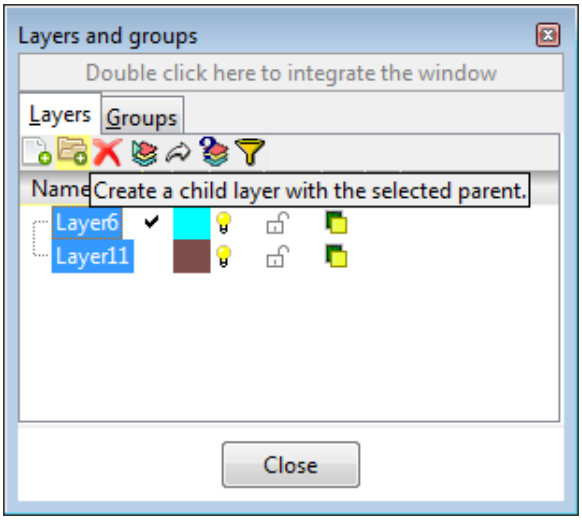


As it can be read in the upper part of the window, if user double click on that part, the Layers window is integrated in GiD window. User can choose to work with the Layers and groups window integrated or not.

All the actions related with layers and groups can be accessed by clicking the right mouse

button onto the Layers and groups window. Most of them can be also used by the corresponding icon in the upper part of the Layers window.

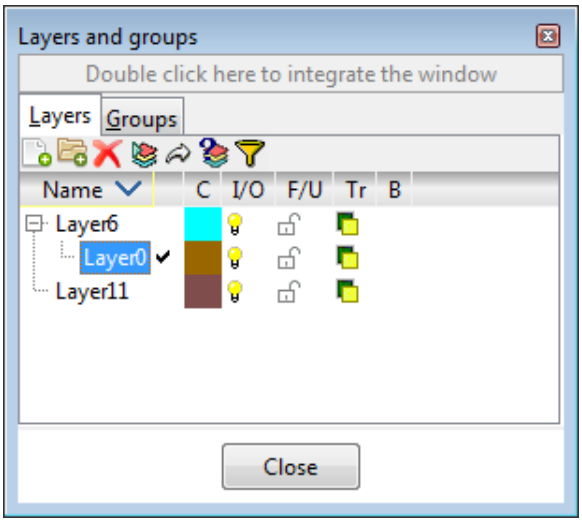
By moving the mouse over the icons of the upper part of the window and staying 2 seconds onto an icon, a help message is shown in order to give the user information about the action associated with the icon.



2.5.1 Create a layer

GiD allows to create a hierarchical structure of Layers, so as a Layer can contain sub-layers. Let's create a Layer into another one as an example:

1 . Select (using the left button of the mouse) the 'Layer6'.
2 . Select the **New child** option in the right mouse button menu, or click  in the upper part of the Layers and groups window. Automatically, a layer named 'Layer0' should appear, as shown in the following figure:

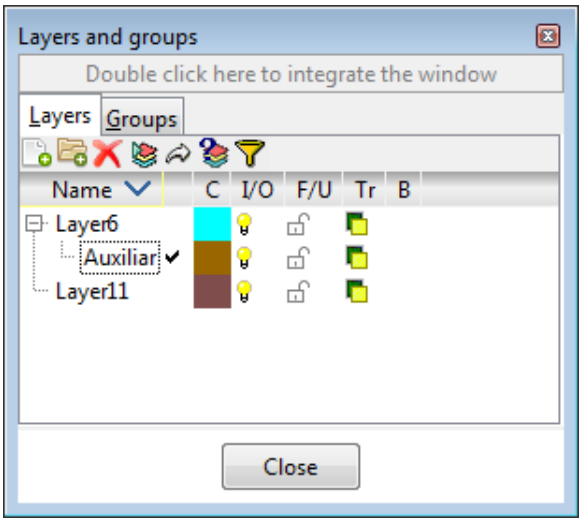


2.5.2 Rename a layer

To rename a Layer user should select the layer in the Layers and groups window and press **F2** key, or select the **Rename** option in the right mouse button menu.

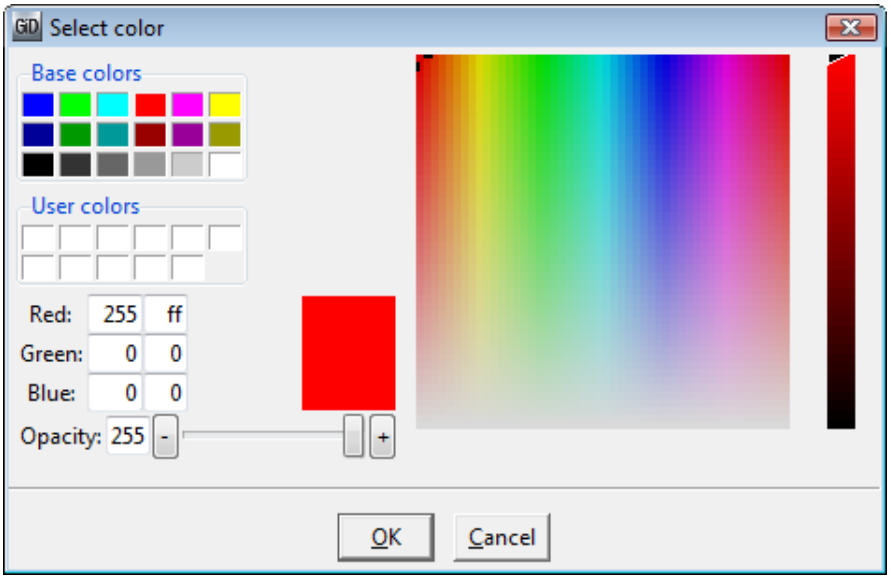
1 . Select the Layer0
2 . Rename it to 'Auxiliar'

Now the Layers window should look like the following picture:



2.5.3 Change the color of a layer

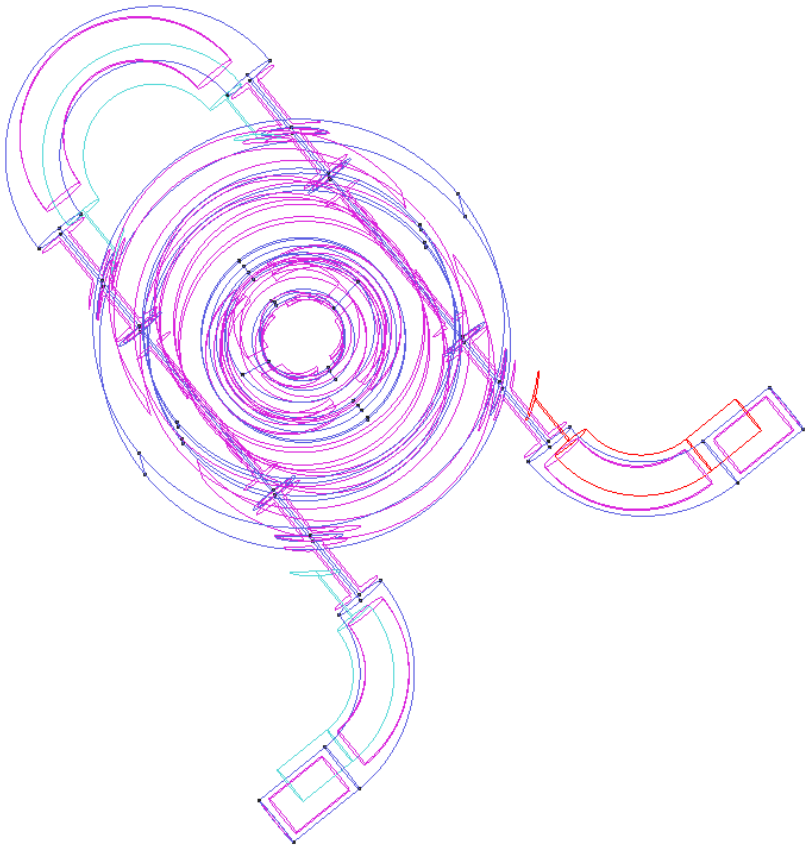
By clicking on the colored square next to each layer name, the following window pops-up, allowing the user to change the color of the layer:



2.5.4 Send entities to a layer

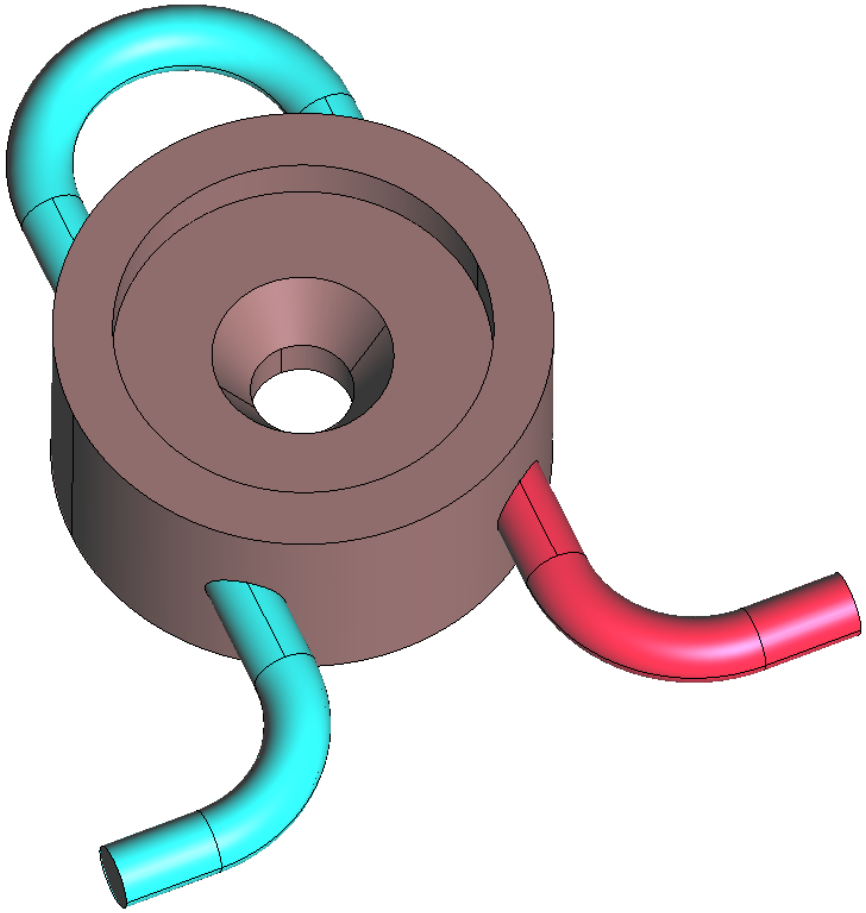
User can send entities to a specific layer. As an example we are going to send to the layer 'Auxiliar' a part of the model:

1 . Select the layer 'Auxiliar' in the Layers window
2 . Select the option **Send to** from the right mouse button (or click icon)
3 . Select **Volumes** and select the volume shown in red in the following figure:



4 . Then press **Escape** to exit the selection mode.

5 . Set the render mode to **Flat**. The color of selected volume has changed to the one of the layer 'Auxiliar', as shown in the following figure:



2.5.5 Switch On/Off

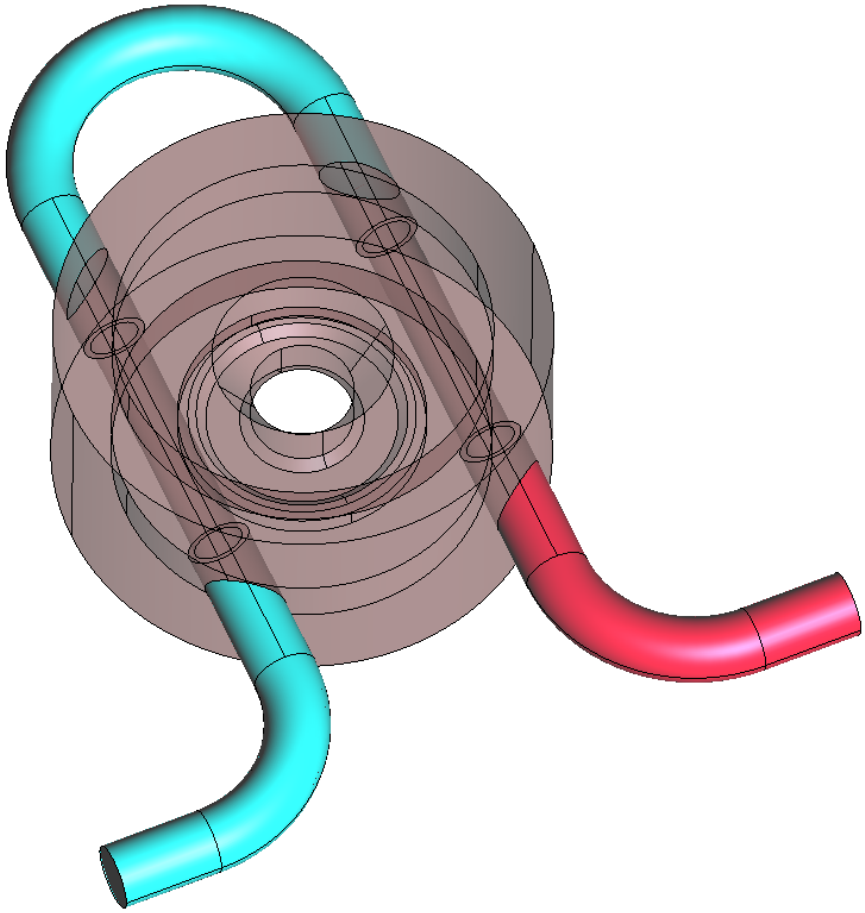
By clicking on the icon which is next to each Layer inside the Layers and groups window, user can switch on and off the corresponding layer. This is very useful in order to visualize just some specific parts of the model.

2.5.6 Freeze a layer

At the right side of the bulb, user can set an icon which is a lock. If the lock is closed, the layer is frozen. If a layer is frozen, GiD won't apply anything to the entities of that layer. For instance, if user select some entities to be deleted, if they are into a frozen layer they won't be erased.

2.5.7 Transparency

Next to the 'lock' icon of each layer is the transparency icon. By clicking there, the user can set a layer to be transparent or not. The following figure shows the model with the Layer11 set as transparent:

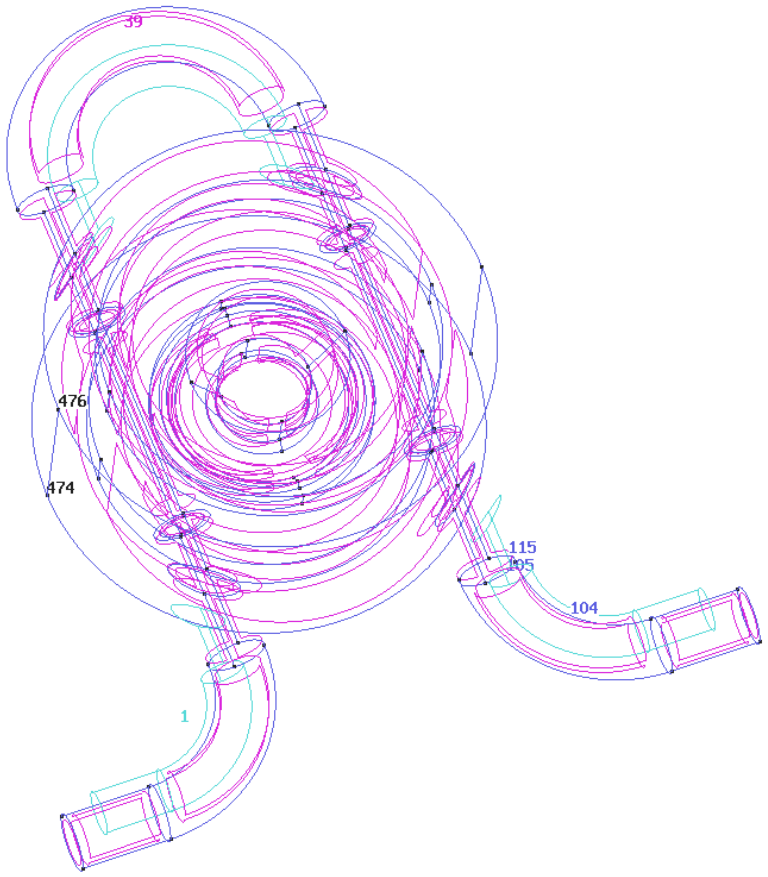


2.6 Entities information

2.6.1 Labels

Using the option **Labels** present in the **View** menu (and also in the right mouse button menu), user can see the number of the entities of the model. Either for points, lines, surfaces or volumes user can choose between viewing the numbers of all the entities, or just the selected ones.

In the following figure the model can be seen with the number of some entities:



As it can be seen, the colors of the numbers of the entities follows the philosophy of the colors of the entities in GiD (volume numbers are in light blue, surface numbers are in pink and so on).

In order to get a better visualization set the render mode to normal when showing labels.

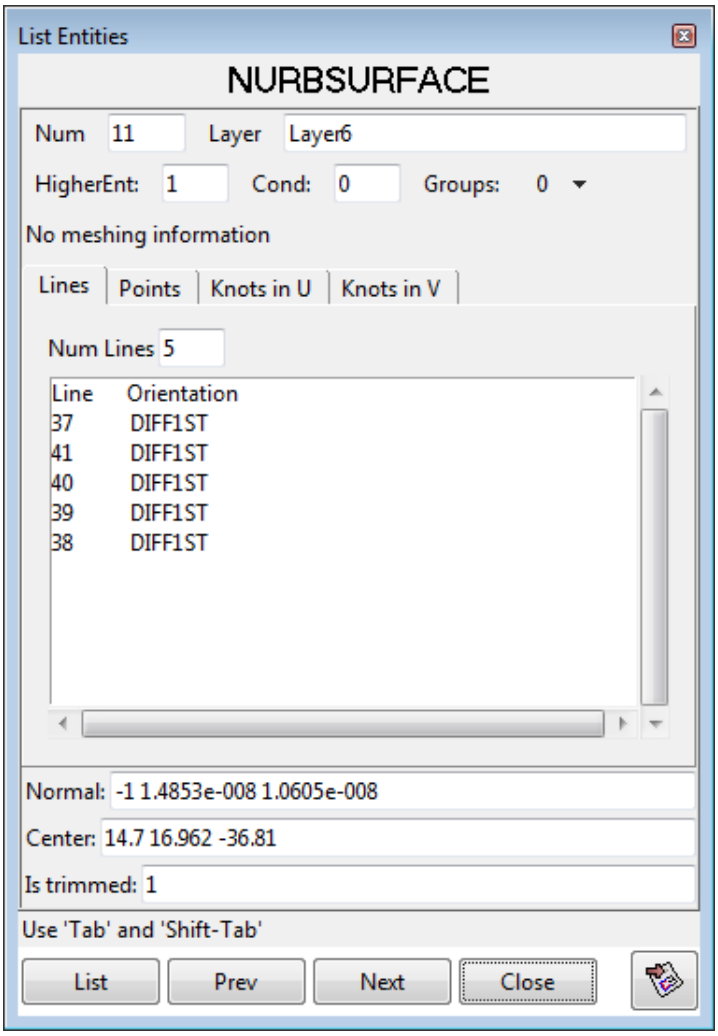
2.6.2 List entities

User have also the option of viewing all the characteristics of a specific entity by selecting **List** in the **Utilities** menu (or clicking in the icons toolbar).

For example:

1 . Select **Utilities->List->Surfaces** in the top menu
2 . Select some surfaces of the model
3 . Press **Escape**

An example of the information got using this option is the following figure:

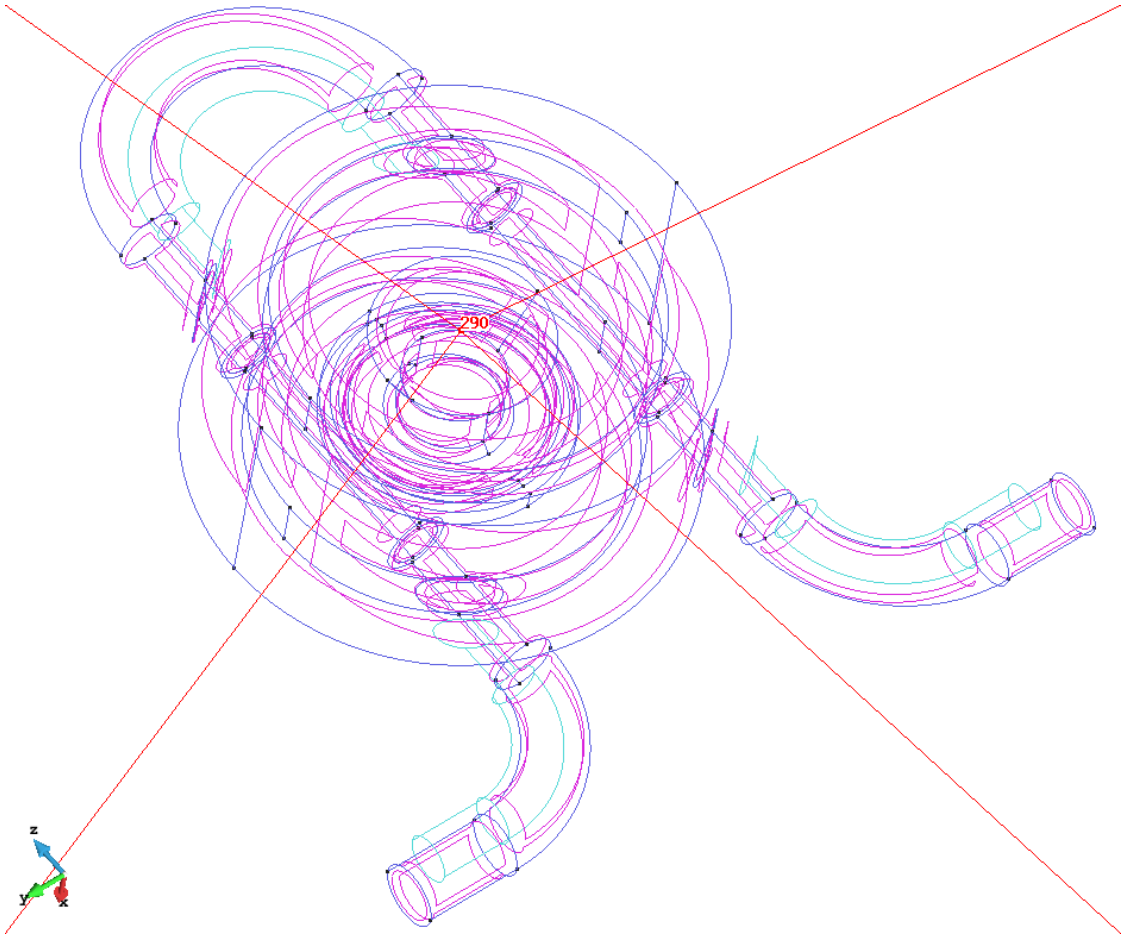


2.6.3 Signal

In complex geometrical models sometimes it is hard to localize an specific entity. Using the **Signal** option in the **Utilities** menu user can know graphically where the entity is, as GiD shows with a red lines cross its potition.

As an example we will signal the line number 290:

1 . Selec **Utilities->Signal->Lines**
2 . Write in the Command bar the number 290 and click ENTER. The result is shown in the next figure:

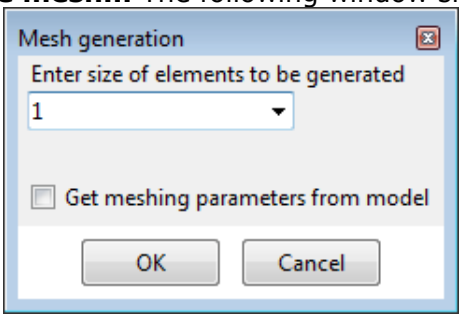


The red lines are centered always onto the specific entity independently on the rotations or view movements.

2.7 Geometry and Mesh modes

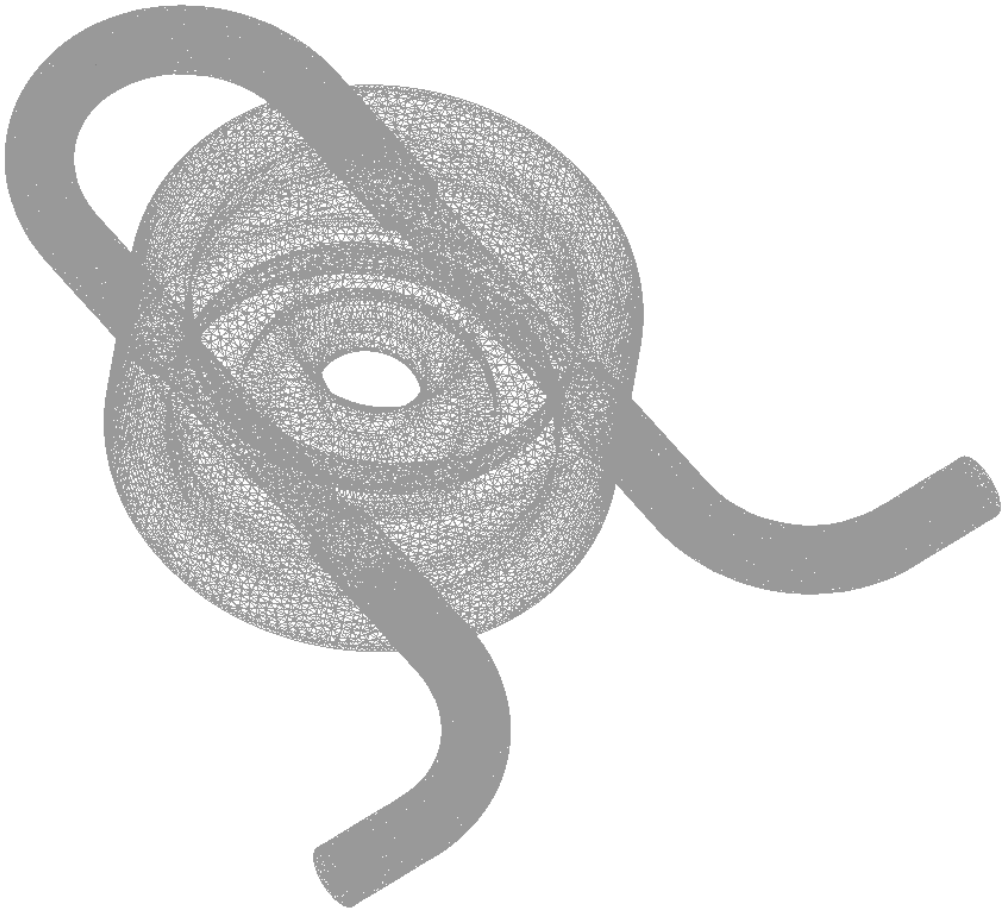
In the preprocessing part of GiD there are two basic modes the user can work with: geometry and mesh. Just in order to see how the mode can be changed we are going to generate a mesh with all the default parameters.

1 . Select **Mesh->Generate mesh...** The following window should appear.



2 . Click OK and wait for the mesh generation. Once the mesh is generated, a window pops up and show the user the result from the mesh generation.

3 . Click on 'View mesh' option, and the following visualization of the model should appear:



Now we are in 'mesh' mode. Changing the render mode user can see that the color of the mesh entities also follows the Layer colors.

Selecting **View->Mode->Geometry** user can change to the geometry mode again. The icon in the toolbar switch between both modes

2.8 Pre and Post

GiD basically works in two modes: preprocessing and postprocessing.

To change between both modes please select **Files->Postprocess** or **Files->Preprocess** (or clicking in the upper toolbar).

We will use a different model to work in postprocess mode.

1 . Open the **box3D.gid** project
2 . Select **Files->Postprocess**

2.9 Select and display style

Through the **Select & Display Style** window several options can be specified for volumes, surfaces and cuts. Among these options volumes, surfaces and cuts can be switched on and off, their colour properties can be changed, and their transparency too.

Other interesting options which can be changed are the style of the set and the width of the elements' edges.

From this window, volumes, surfaces or cuts can be deleted or their names can be

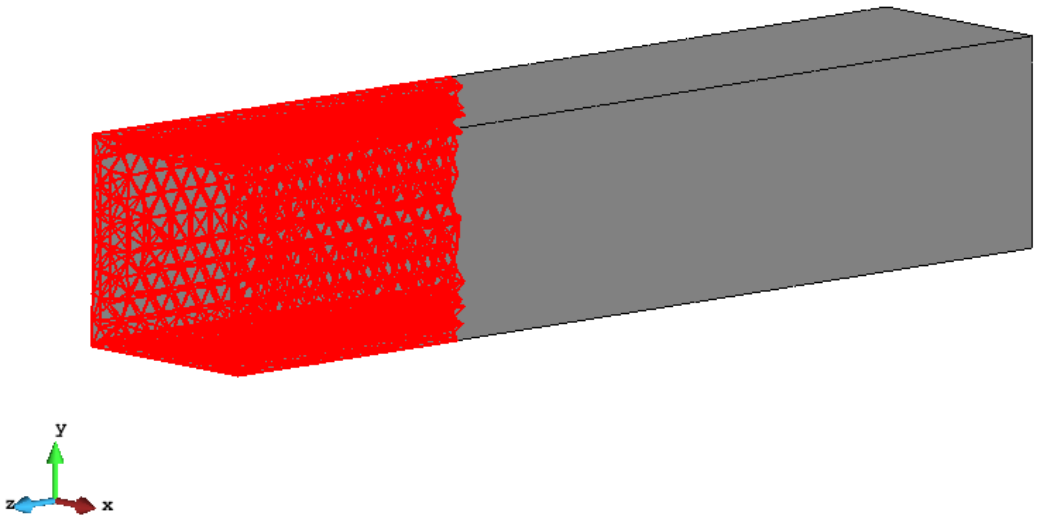
modified.

1 . Select **Window->View style...** using the menu bar or clicking on 

Our model only has 1 layer. We will create a new layer with some elements.

2 . Press button **Send to->New set long name**.

3 . Select some elements.



4 . Press **Escape**.

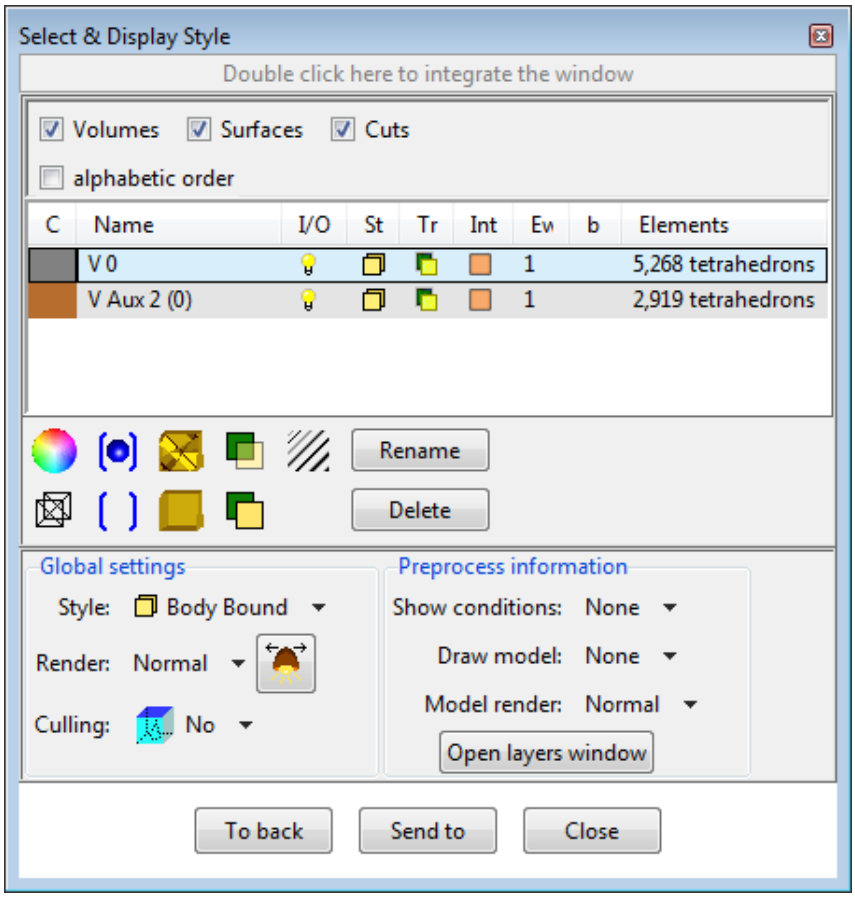
5 . A window appears asking for a name. Enter 'Aux'.

6 . Press **Accept**.

A new layer is created with the selected elements. Now we will change the color of the new layer.

7 . Click on the colored square next to the layer name. A new window is opened. Select a new color.

8 . Press **Apply** and then **Close**.



Let's play with some visualization options

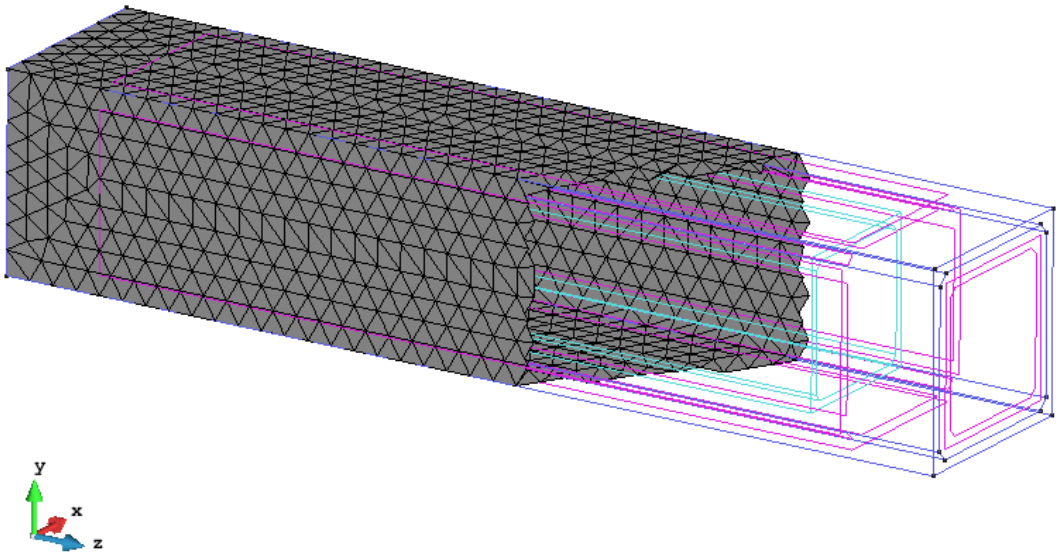
9 . Select **Body Lines** in the "Style" option, at the bottom of the window. You can also do it clicking on in the St column or the same icon in the main window.

10 . Click on the icon of 'Aux' layer in order to switch it off.

It's possible to draw preprocessing information, for example the geometry.

11 . In **Draw Model** option select **Geometry**

Now our model should look like this:



NOTE: The View style window can be integrated inside GiD interface, just double click on the upper bar of the window. To tear it off again, double click the upper bar again.

NOTE: Mesh styles can also be changed clicking on the icon , placed in the left icon bar. This style affects all sets of the model.