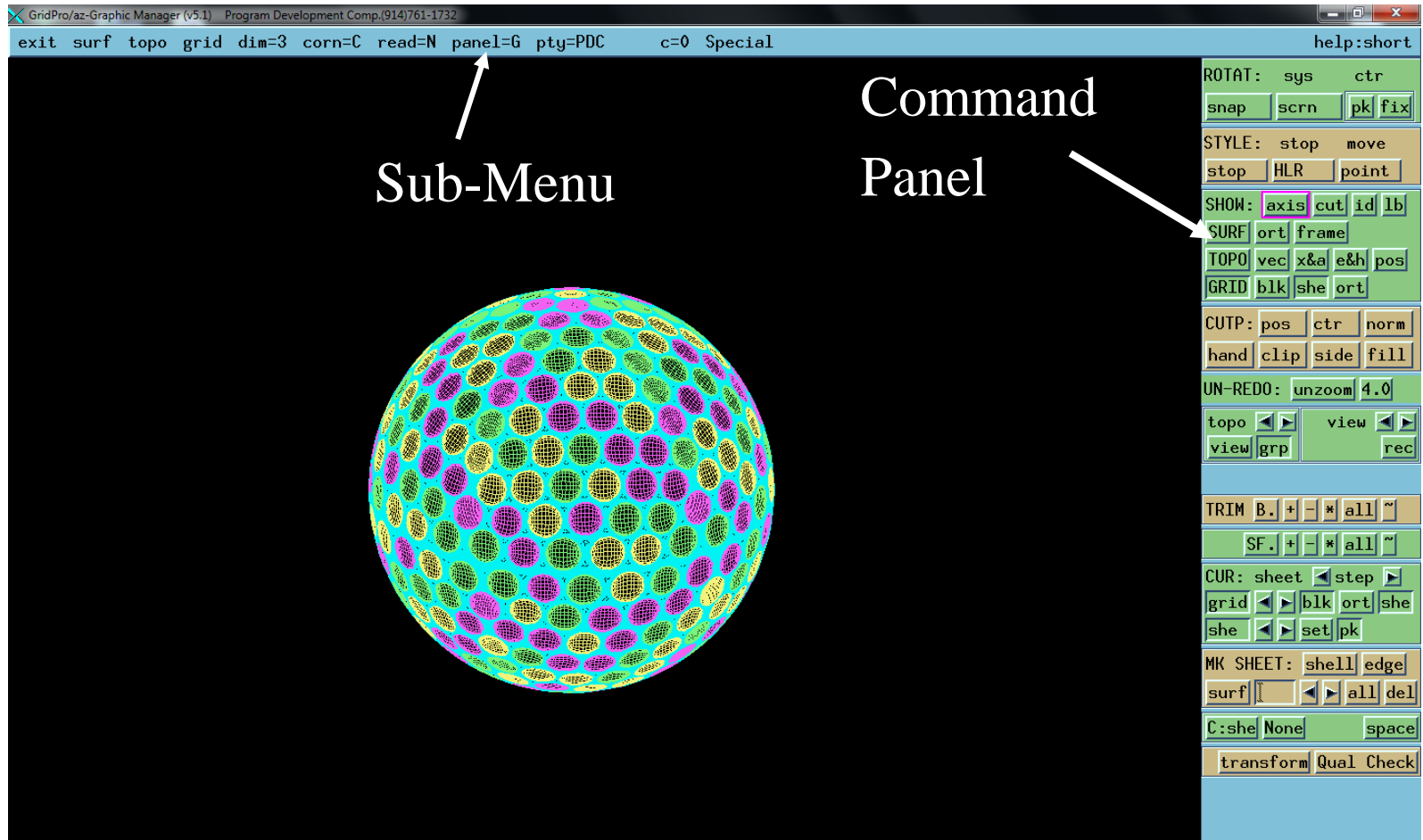


Using GridPro

- The GridPro GUI is the primary grid generation tool and is composed of the **sub-menu** and **command panel**

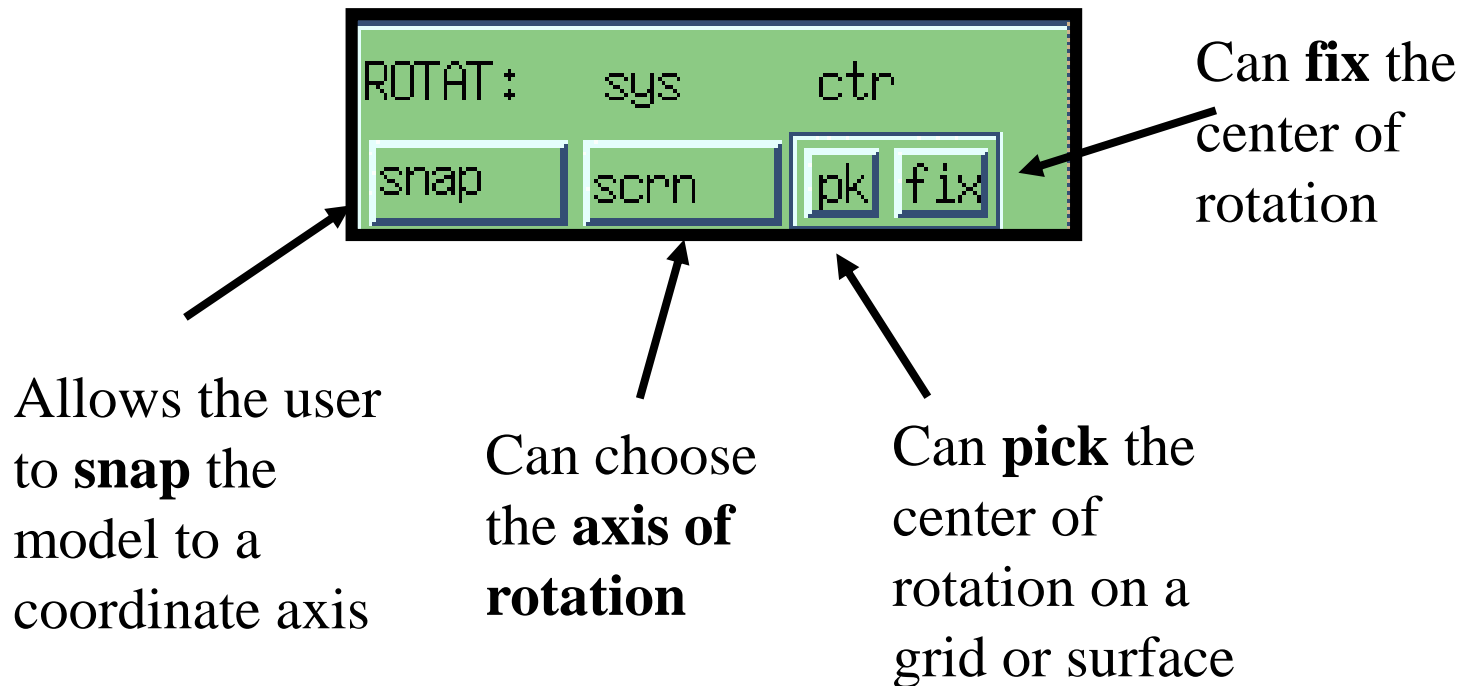


Command Panel

- GridPro is composed of 4 command panels –
 - Topology Builder
 - Grid Viewer
 - MiniCAD
 - Property Setter
- The command panel is composed of many sub-command panels used to implement specific functions

Rotate Sub Command Panel

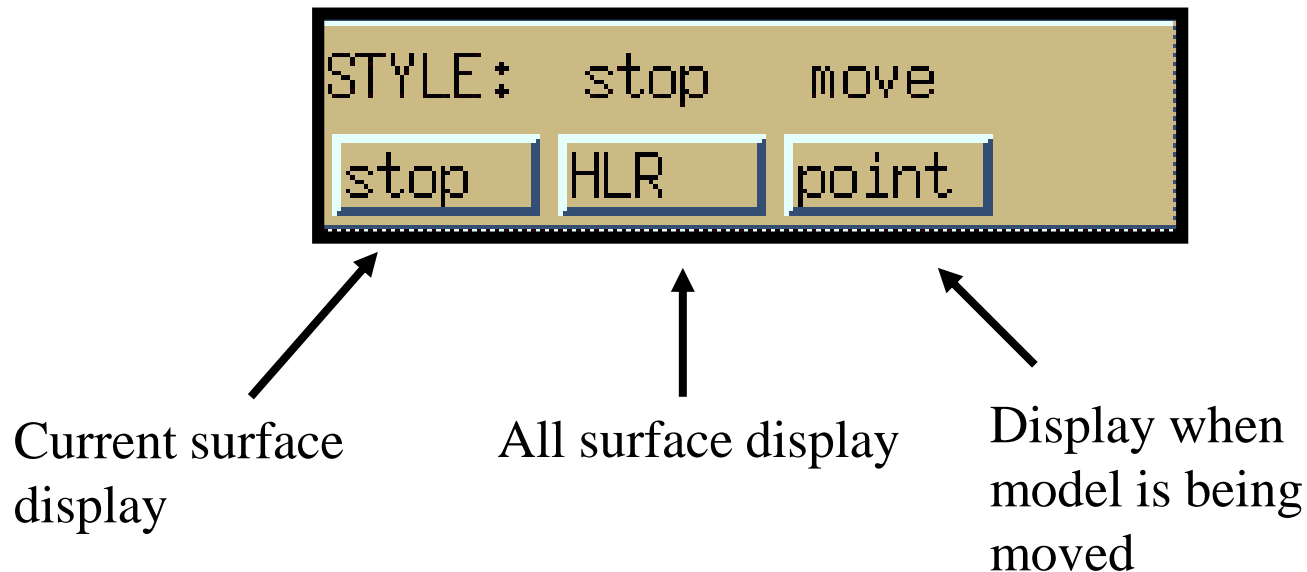
- Rotating, translating and snapping the model to a coordinate system



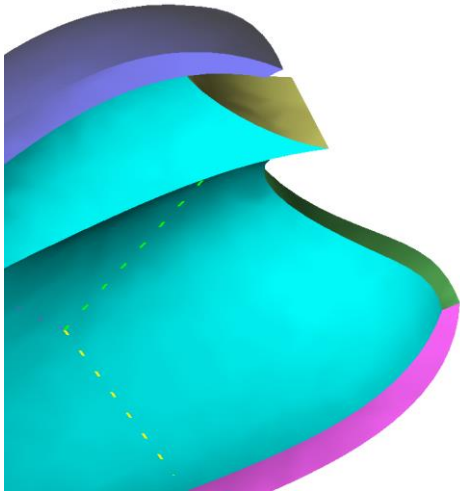
Display Sub Command Panel

Surface/Grid Display Style

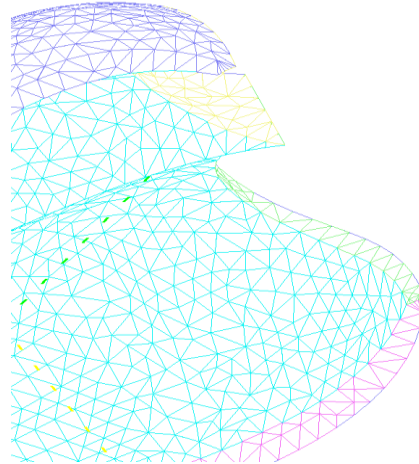
- GridPro displays in various styles including **shade**, **hidden line removal**, **shade with hidden lines**, **lines** and **points**.
- The style menu allows the user to select shading for the **current surface**, **all surfaces** and when the model is **moving**.



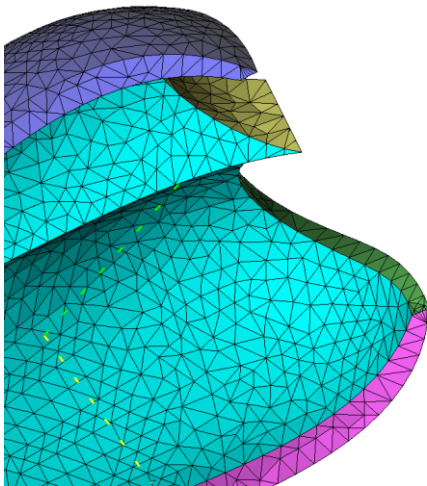
Contd...



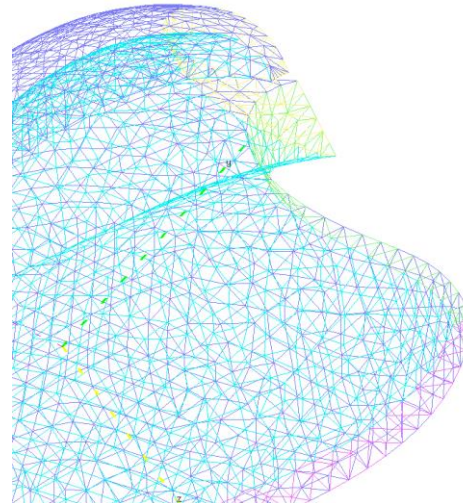
Shade



Hidden Line Removal



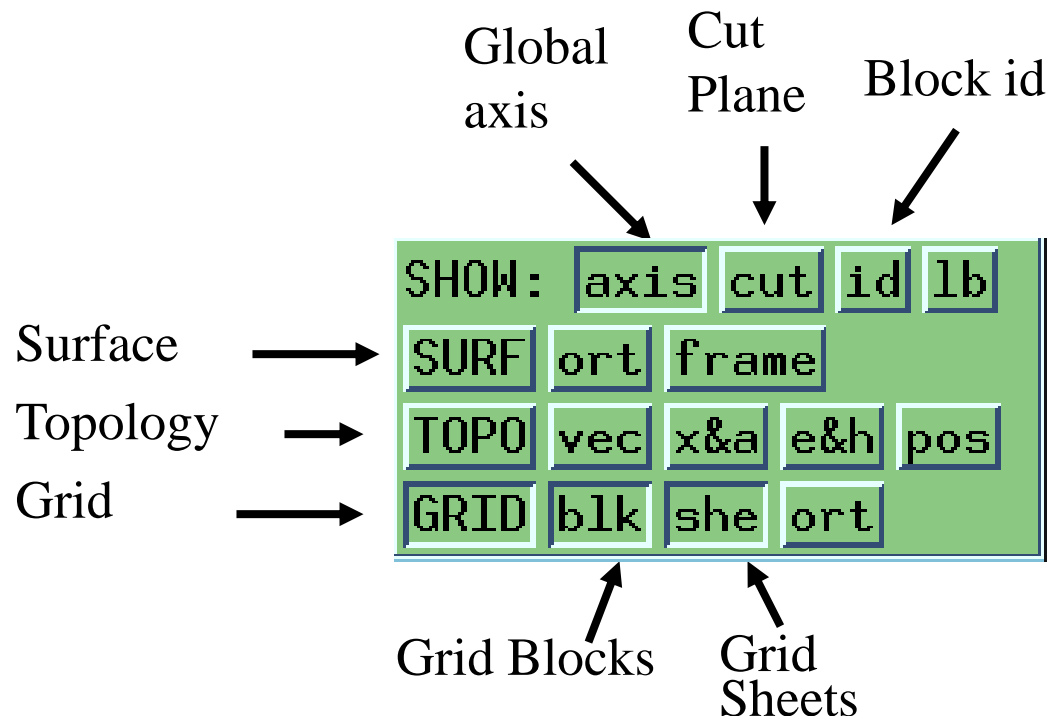
Shade with HLR



Lines

Show Sub-Command Panel

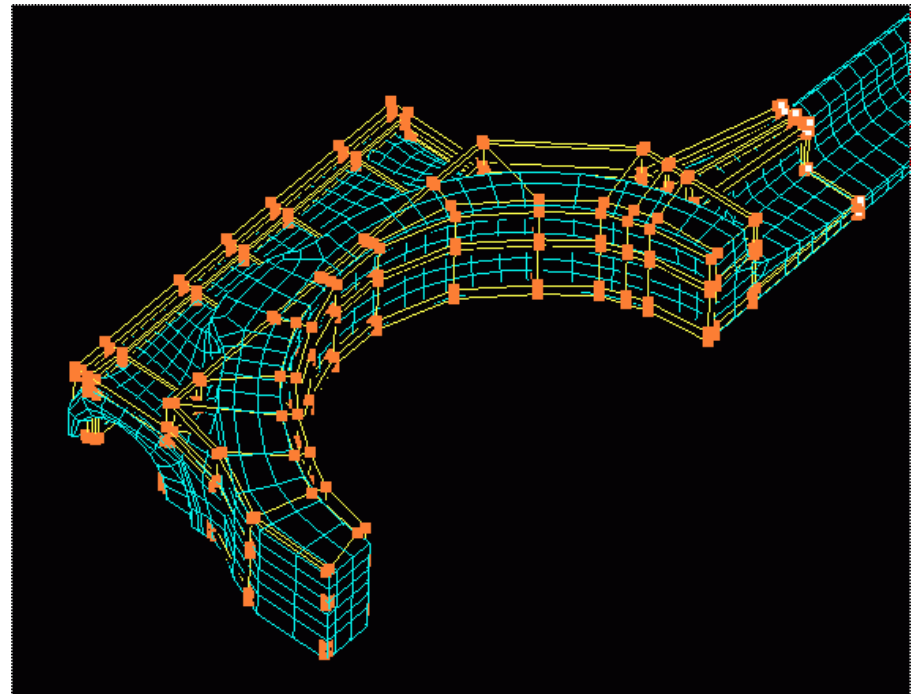
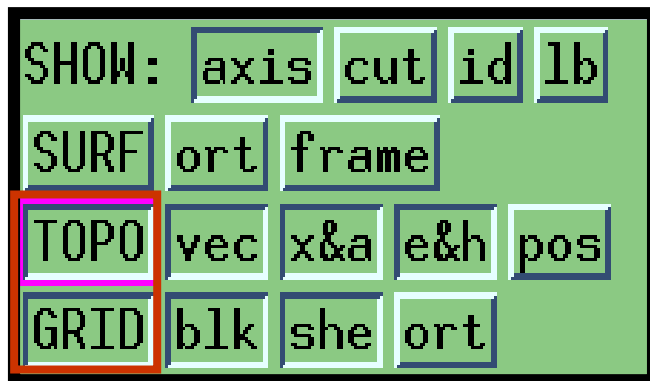
- Allows the user to **turn on** or **off** objects such as **surfaces**, **topology** and the **grid**.
- Allows the user to build the topology while viewing the surfaces



Contd...

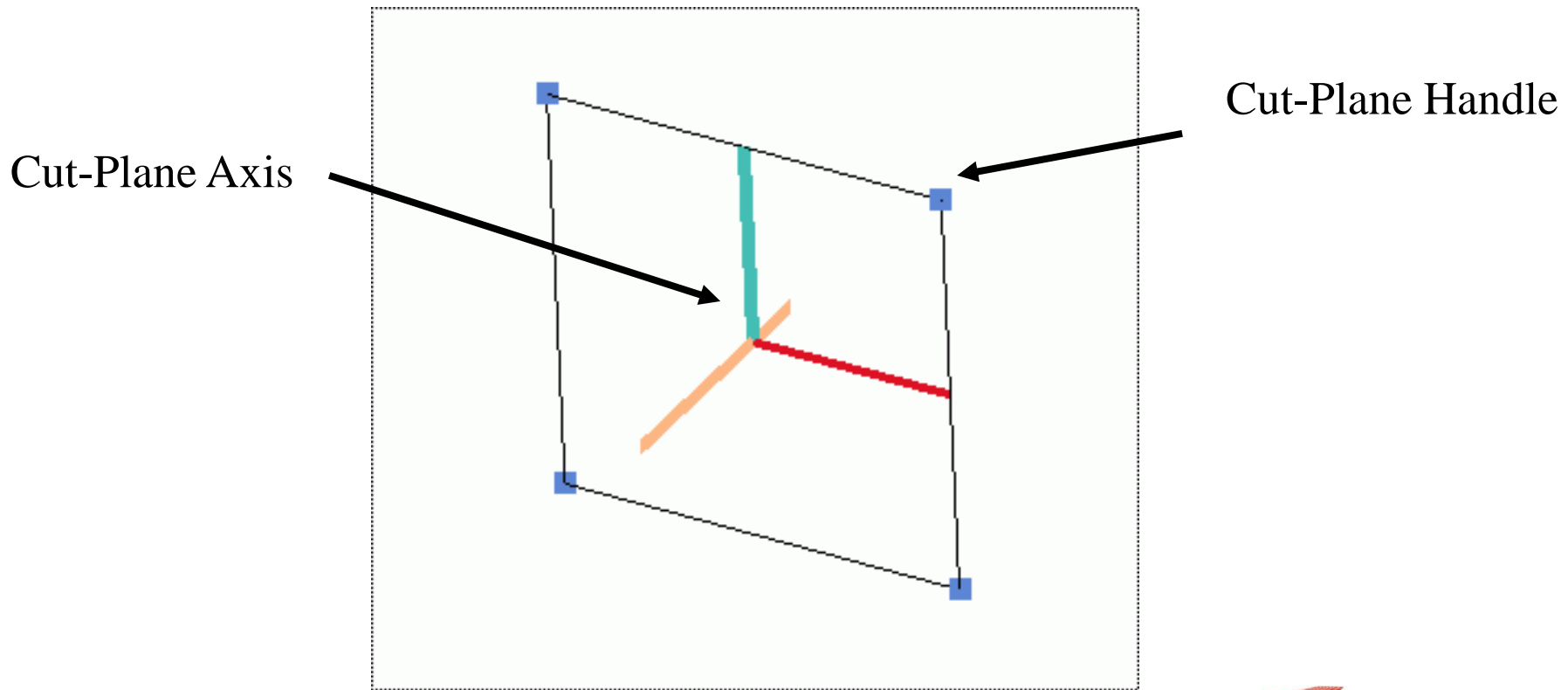
- Useful to investigate certain parts of the grid in relationship to topology

Example: Topology and Grid

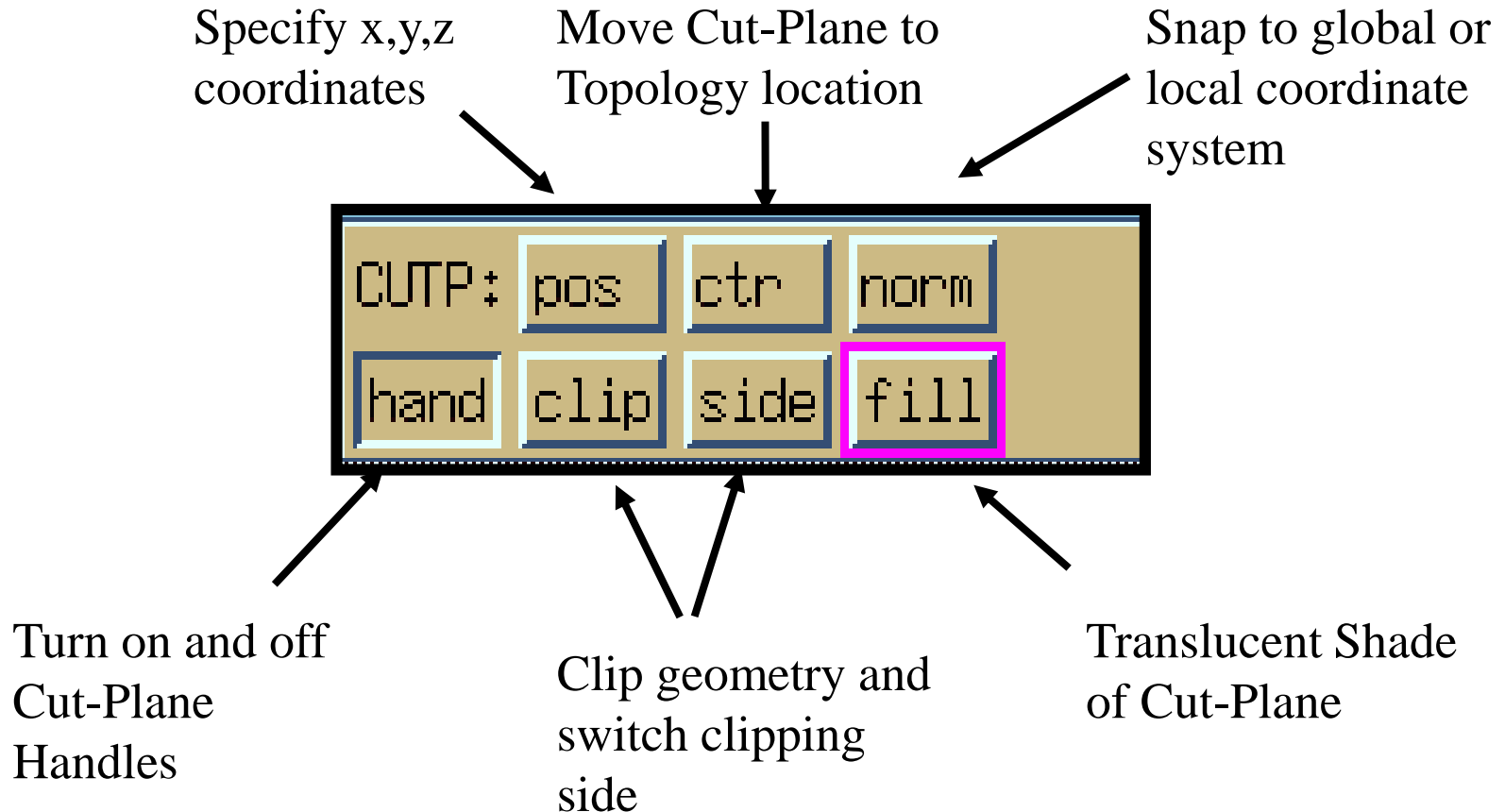


Cut-Plane Sub Command Panel

- The Cut-Plane is primarily used to create topology
- The Cut-Plane is an infinite plane in space that contains its own axis and can be translated and rotated in any direction

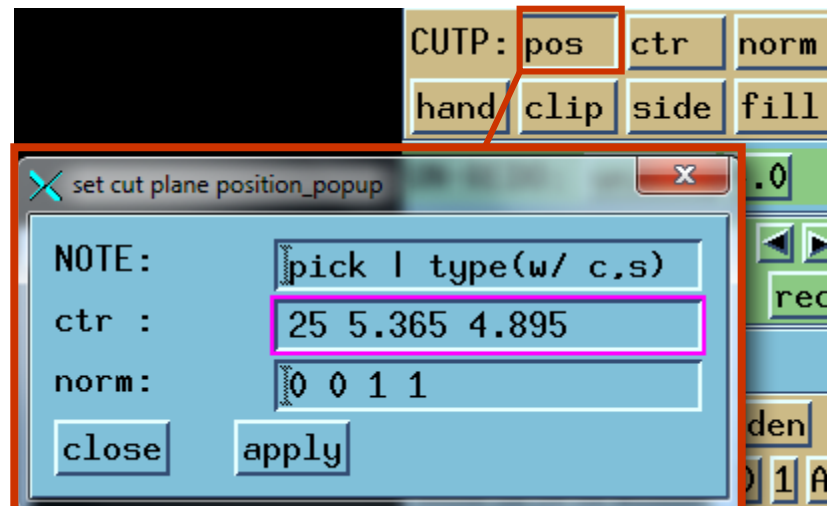


Contd...



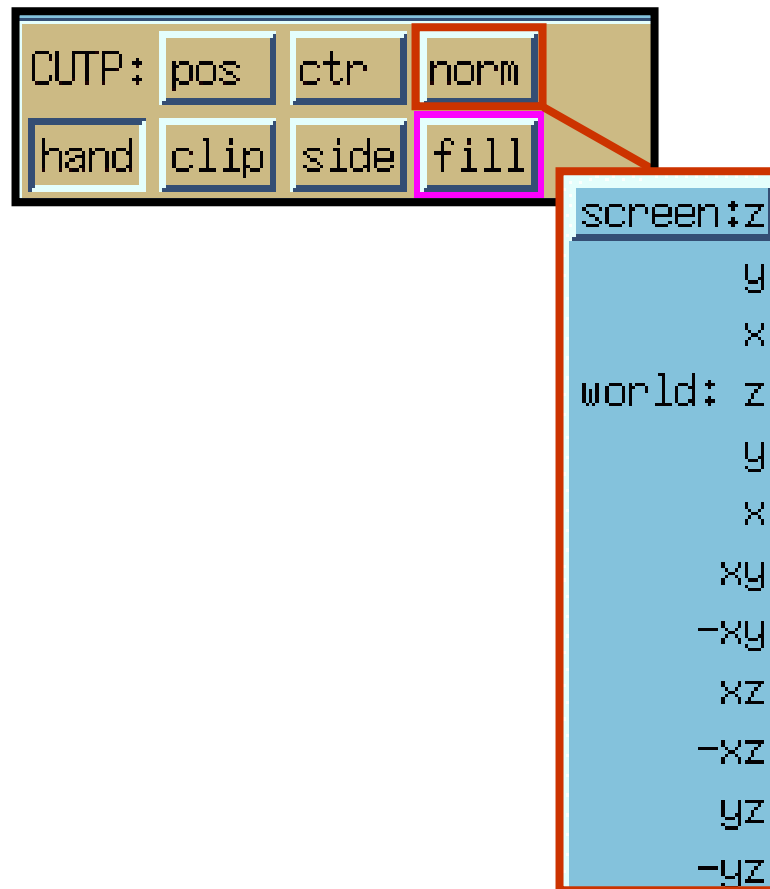
Contd...

- Can pick location and the x, y, z location and surface normal is loaded automatically



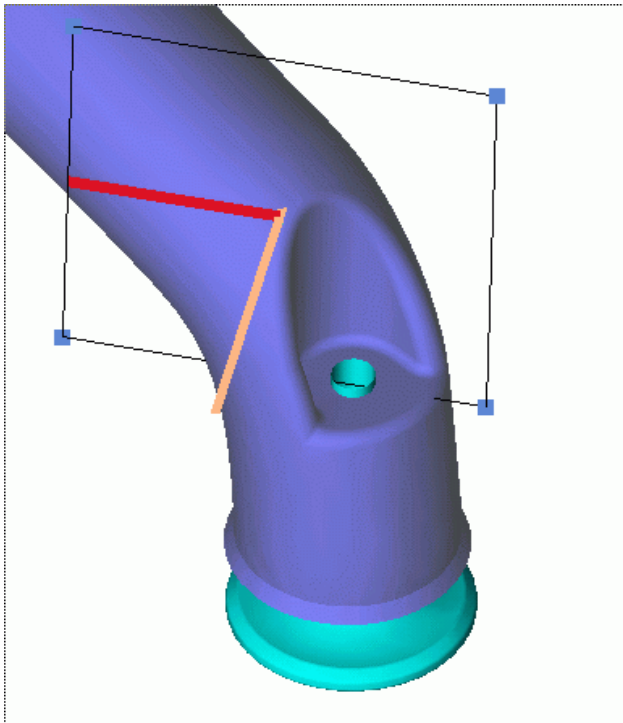
Contd...

- The Cut-Plane can be snapped to the global and screen coordinate systems

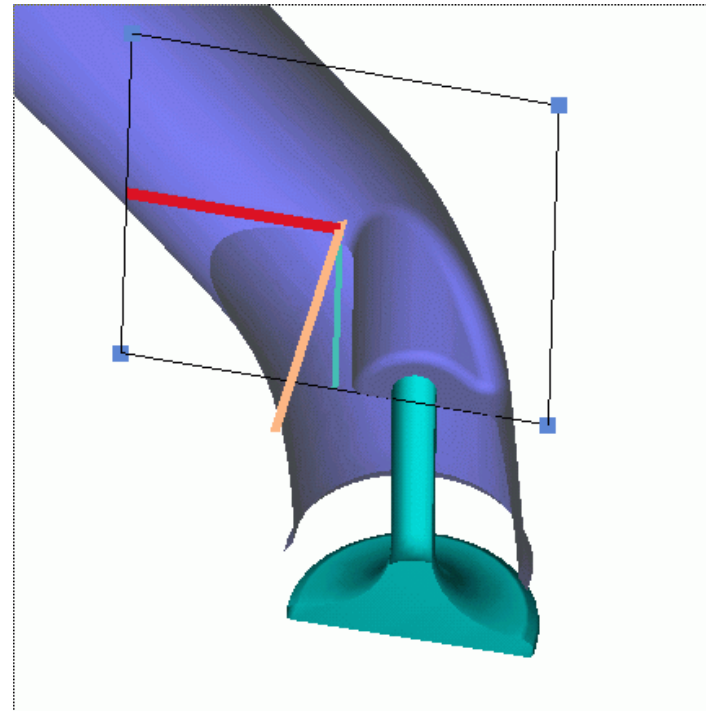


Contd...

- The Cut-Plane can be positioned and surfaces can be clipped so to see inside of the geometry



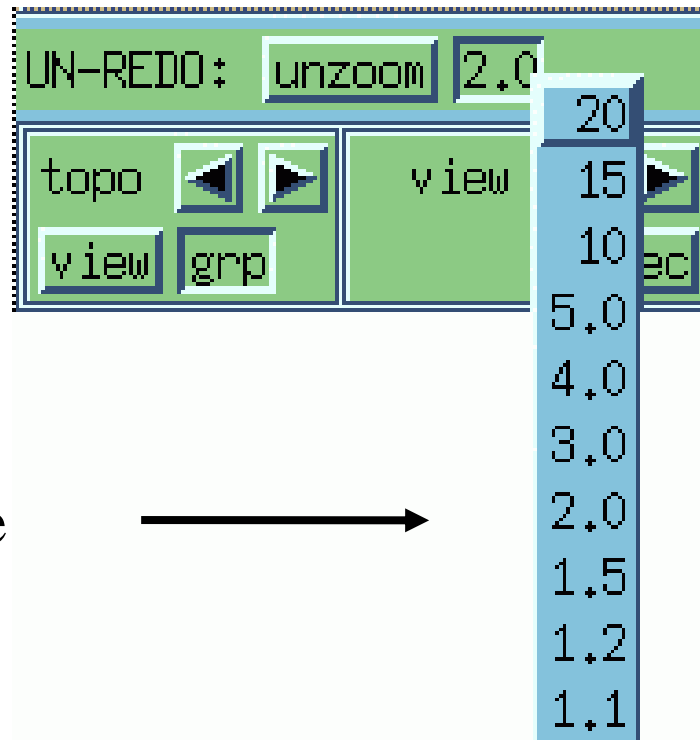
Position Cut-Plane



Clip Surface

Zoom Sub Command Panel

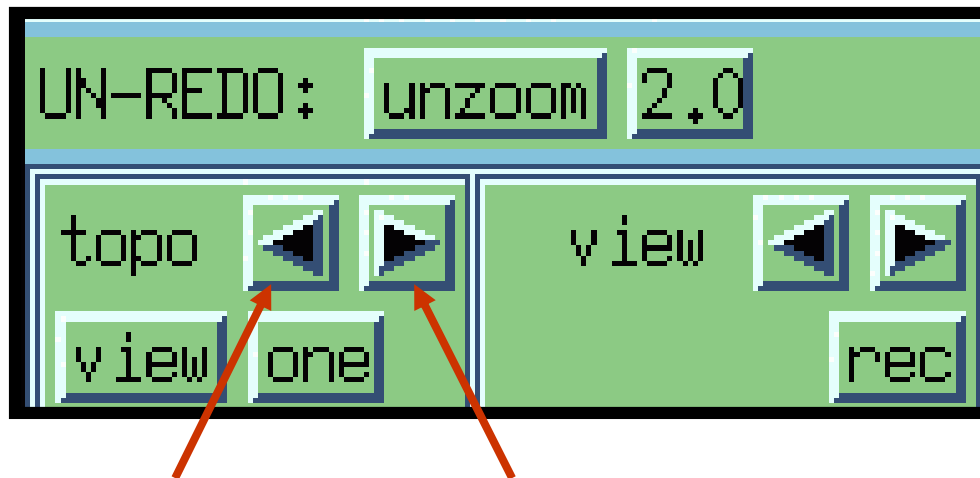
- Zoom in by clicking on right mouse button and drawing a box around area of interest
- Use unzoom button in **UN-REDO** sub-command panel to zoom out, adjustable scale



Unzoom Scale

Contd...

- GridPro allows the user to **scroll** the topology **forward** or **back** to any step during the creation process
- Steps are saved only during the active session

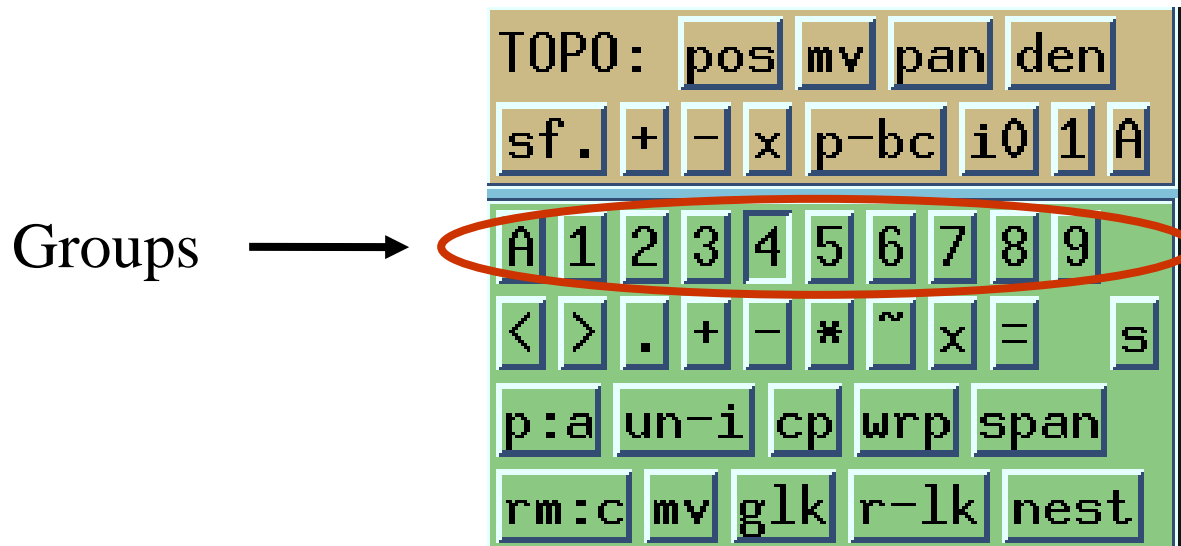


Scroll Back

Scroll Forward

Topology Creation Sub-Command Panel

- Contains all of the functions to **create**, **group**, **edit** topology and **assign** it to surfaces

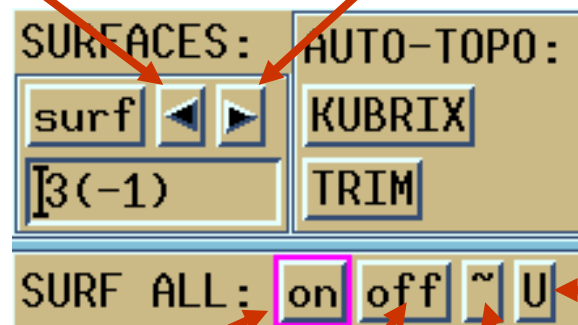


Surface Sub-Command Panel

- Allows to scroll through and hide the surfaces

Scroll back to previous surface

Scroll to the next surface



Switch on all surfaces

Switch off all except current surface

Complement of the shown surfaces

Show unused surfaces (without surface assignments)

Menu Panel

```
exit surf topo grid dim=3 corn=C read=N panel=T pty=PDC      c=0 Special      help:short
```

- exit** : To quit the program
- surf** : To load, reload and delete various surfaces
- topo** : For creating topology, surfaces, starting and restarting the grid generation process and to interactively change the grid density.
- grid** : Load, reload and delete the grid
- dim=3/2** : Set GridPro in 2 or 3 dimension
- corn=C/S** : Allows you to place topology points on the surface or the Cut Plane
- read=N/D/A** : Allows you to automatically read the grid into GridPro for display
- panel=T/G/S/P** : Allows you to switch modes. T is for topology generation, G for grid viewing, S for minicad and P for setting grid properties (boundary conditions, etc.)
- pty=PDC** : Allows you to select the solver to which the mesh has to export.
- c=0/1** : Allows the user to invert the graphics colour
- special** : To use some of the advanced tools
- help:short/long** : Allows you to read through the help of each option.