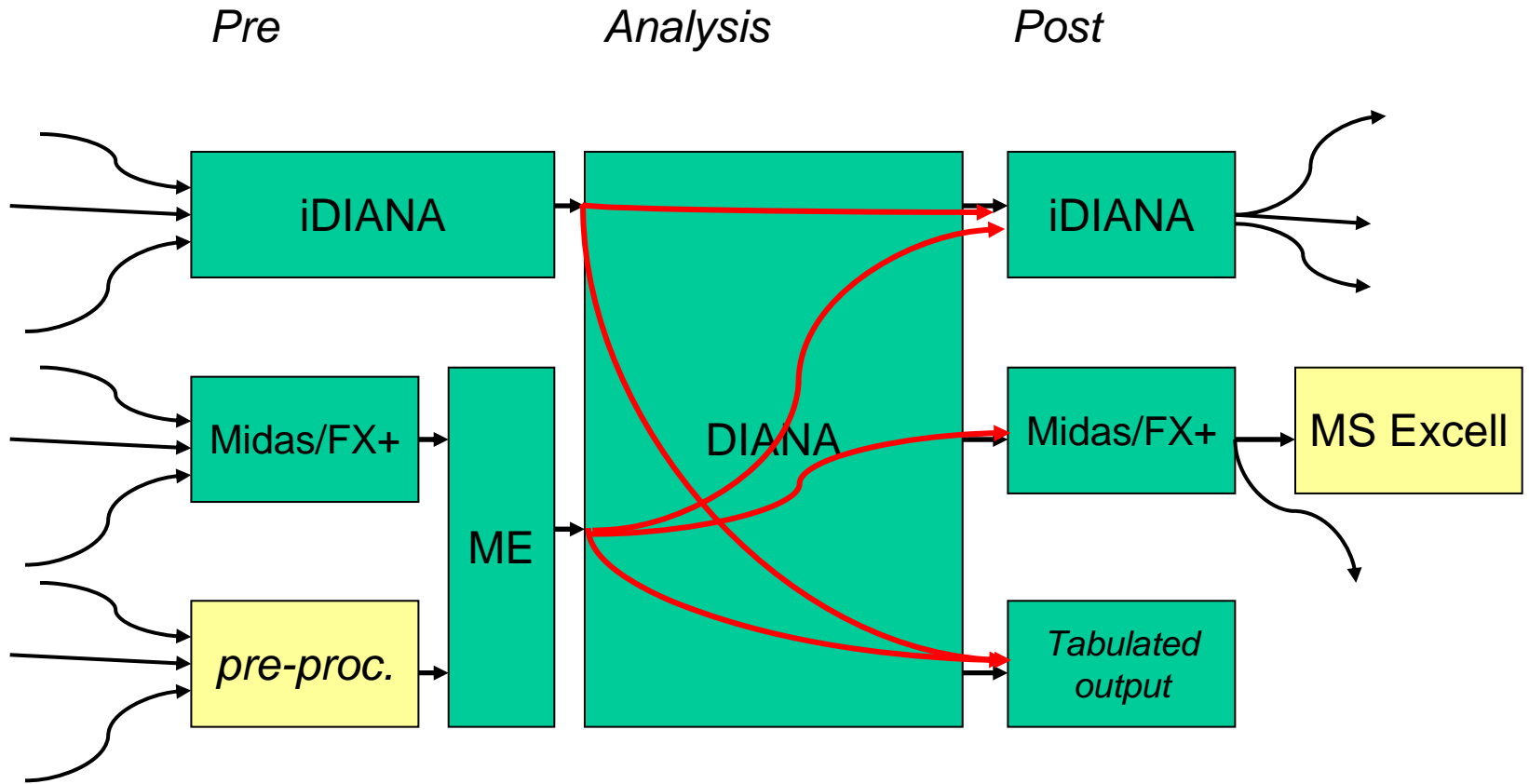


# **Getting started with FX+ for DIANA**

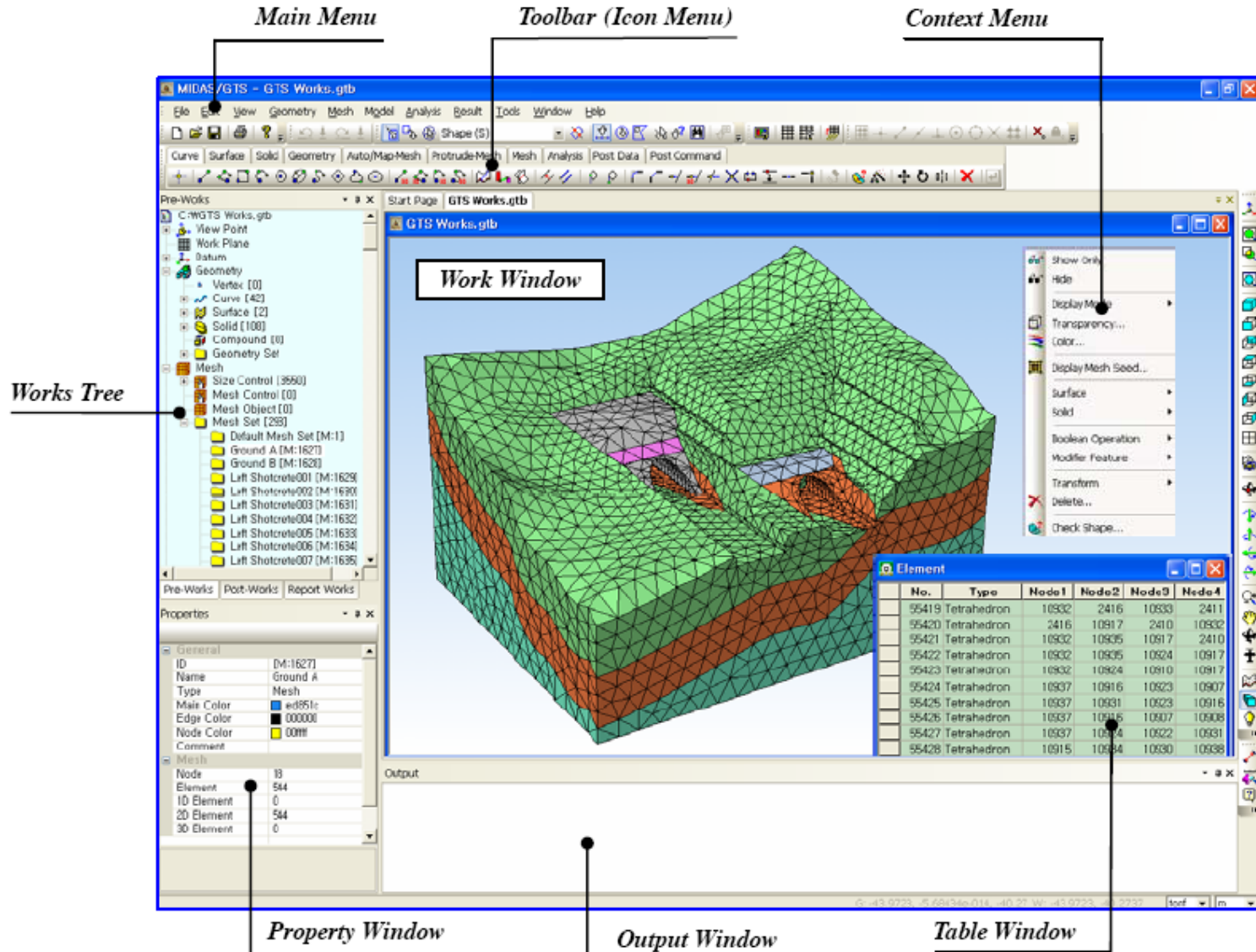
# DIANA with different Pre-Post options



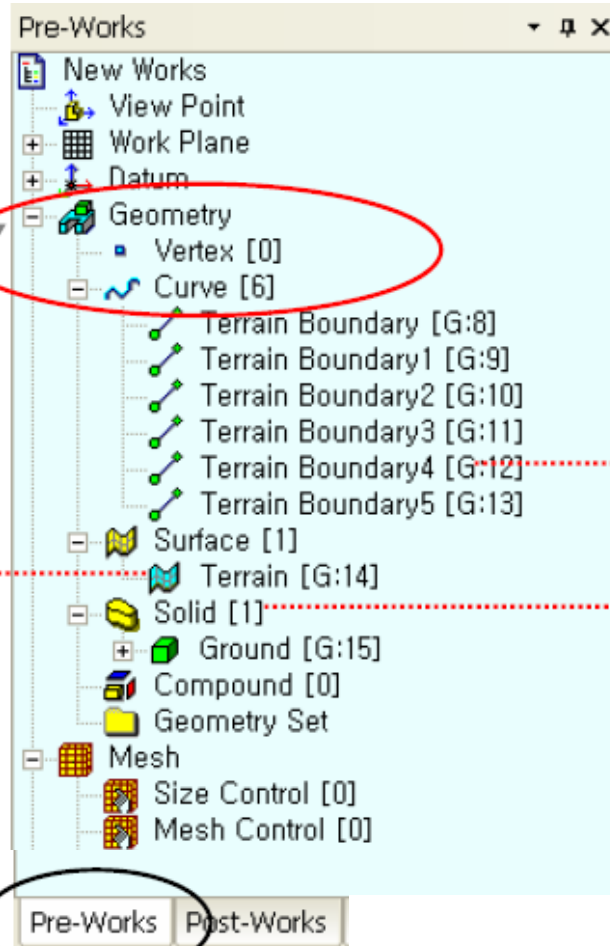
## Work sequence

- Geometry modelling
- Attribute definition (materials + properties)
- Mesh generation
- Boundary condition definition  
(supports, change in material properties...)
- Load definition
- Define analysis specifications
- Run analysis
- Post-processing

# The Graphical User Interface of FX4D



# Pre-processing work tree



## Structure of Pre-Works Tree

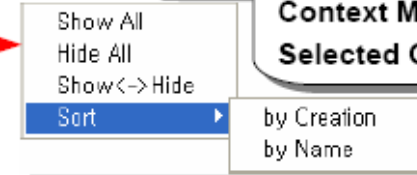
- Group [Number of Entities]
- └ Entity Name [ID]
- ...



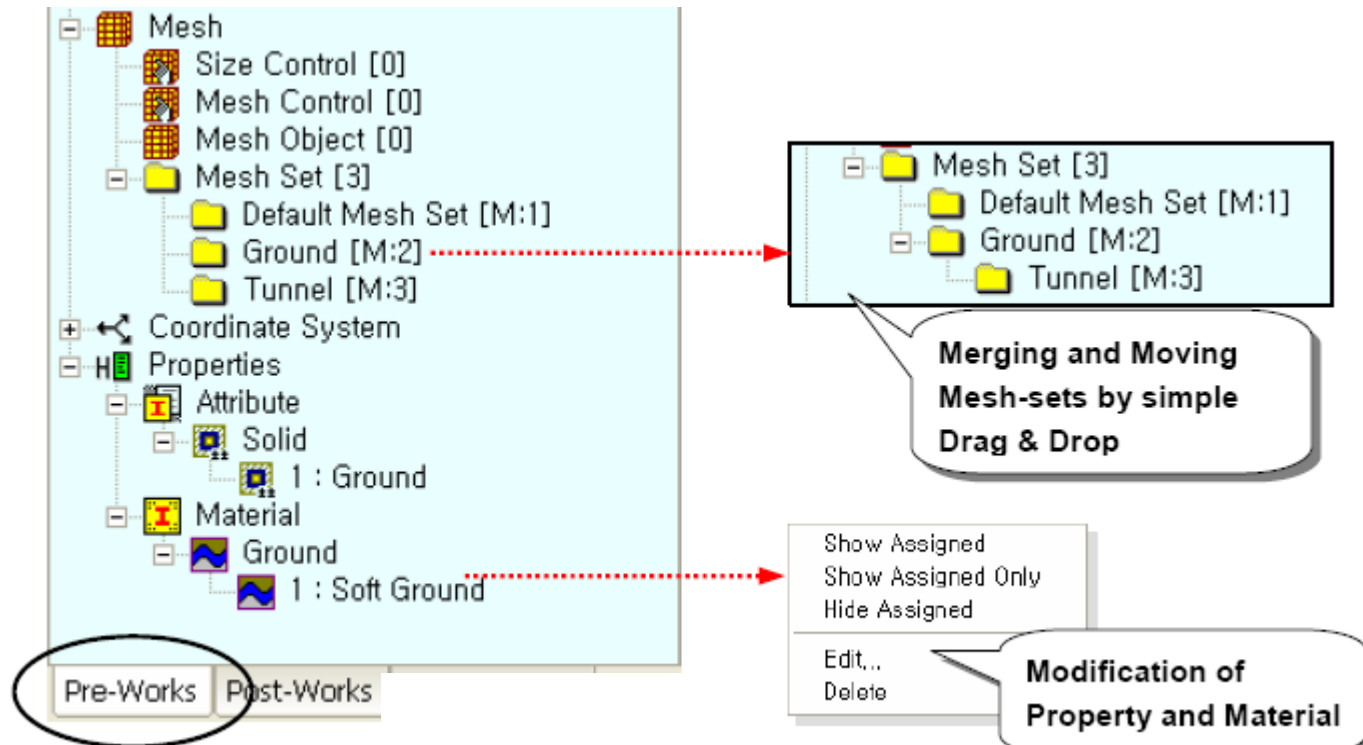
F2 Key: Rename  
Del Key: Delete



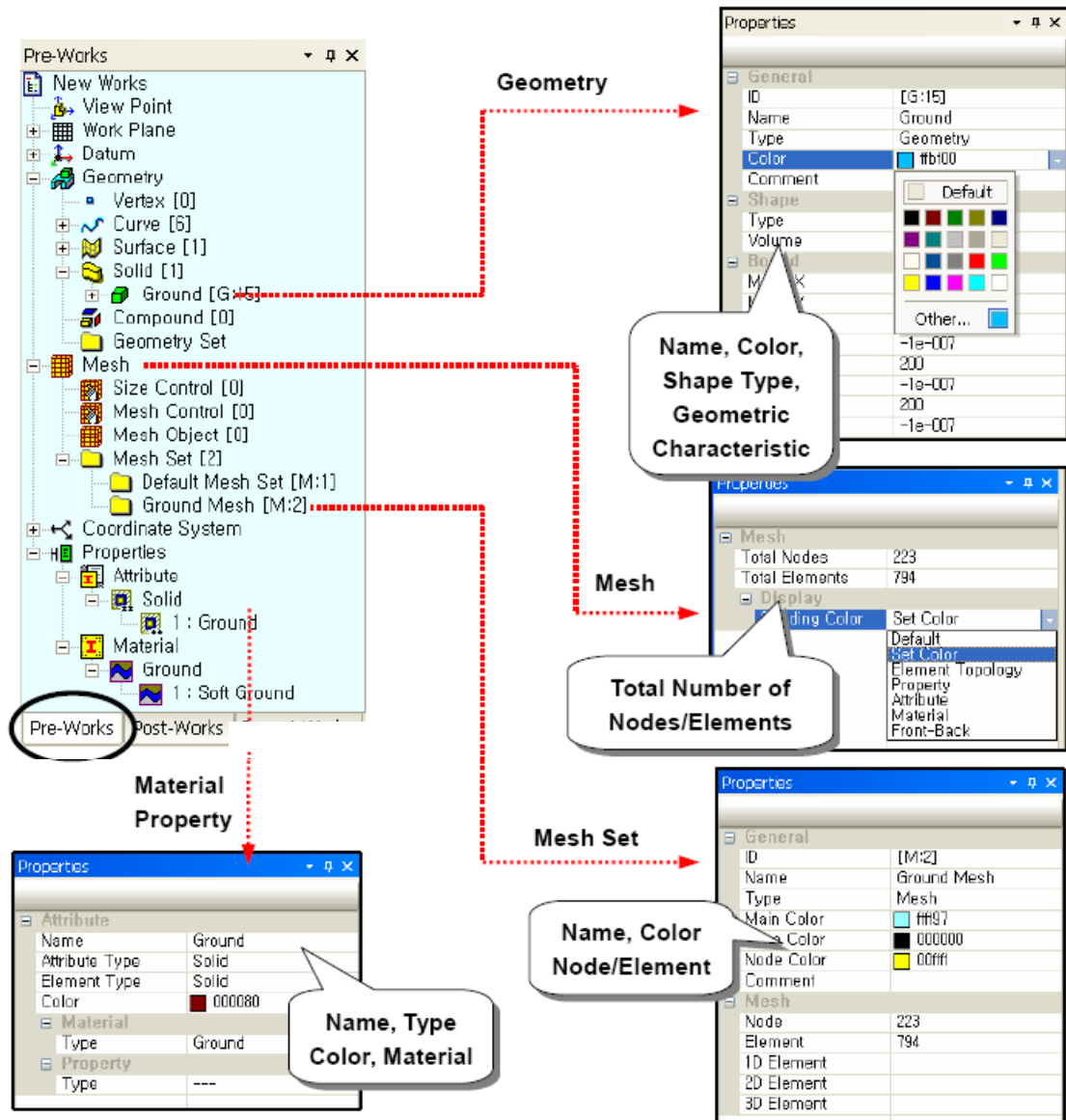
## Customization of Context Menu by the Selected Object



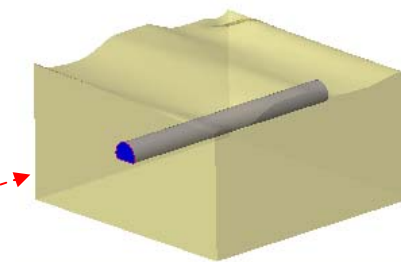
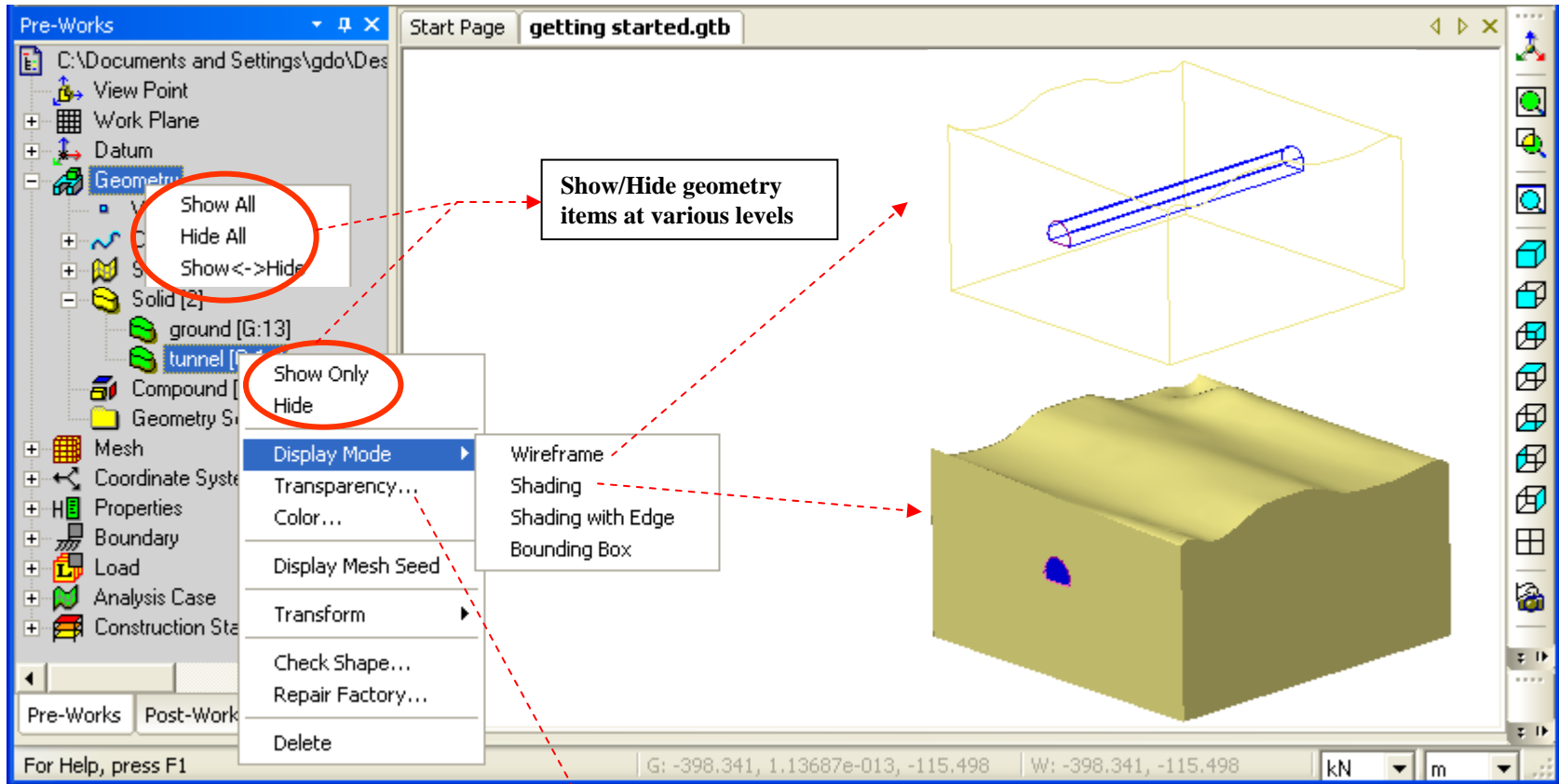
# Pre-processing work tree



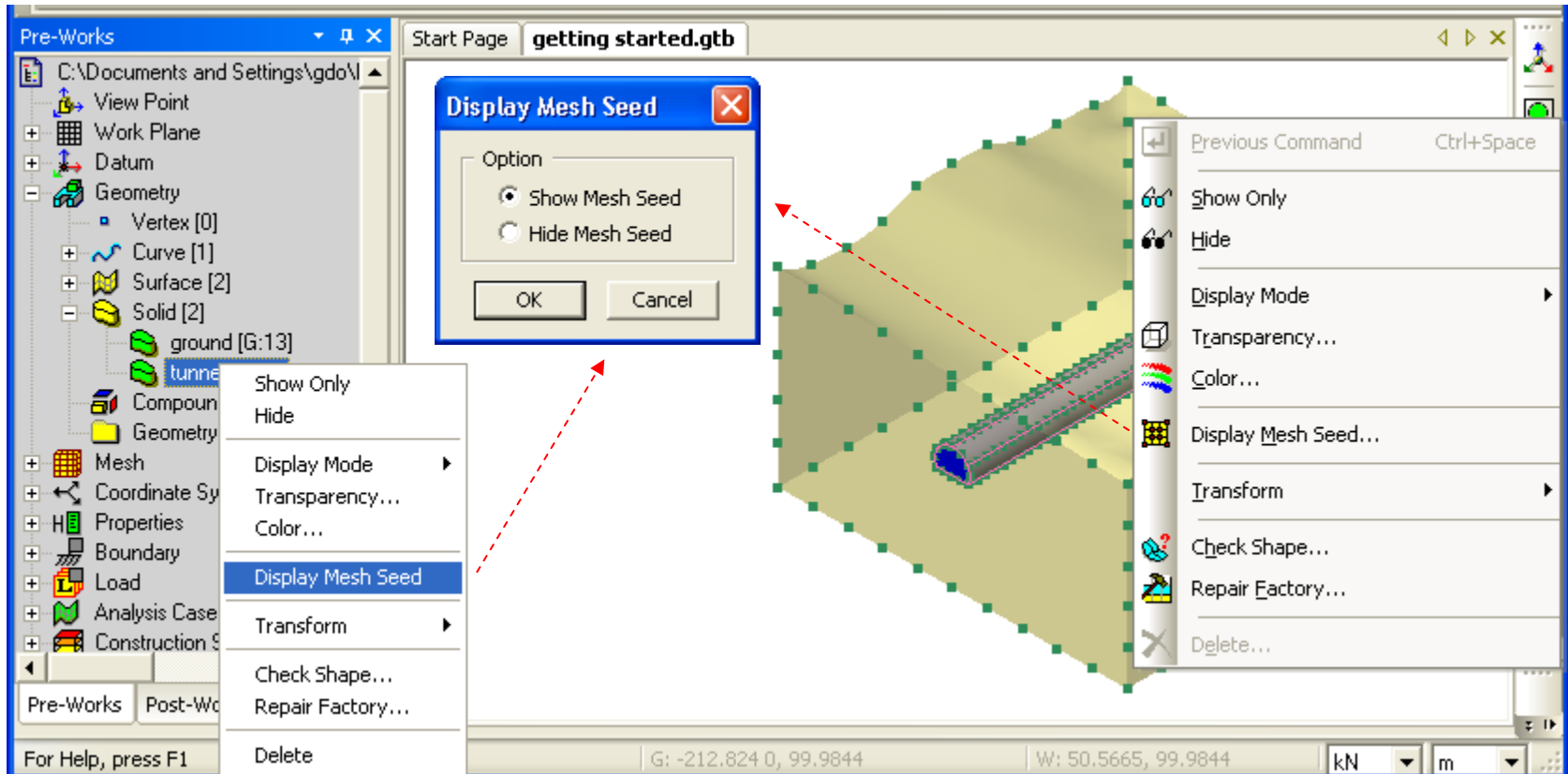
# Pre-processing work tree and Property window



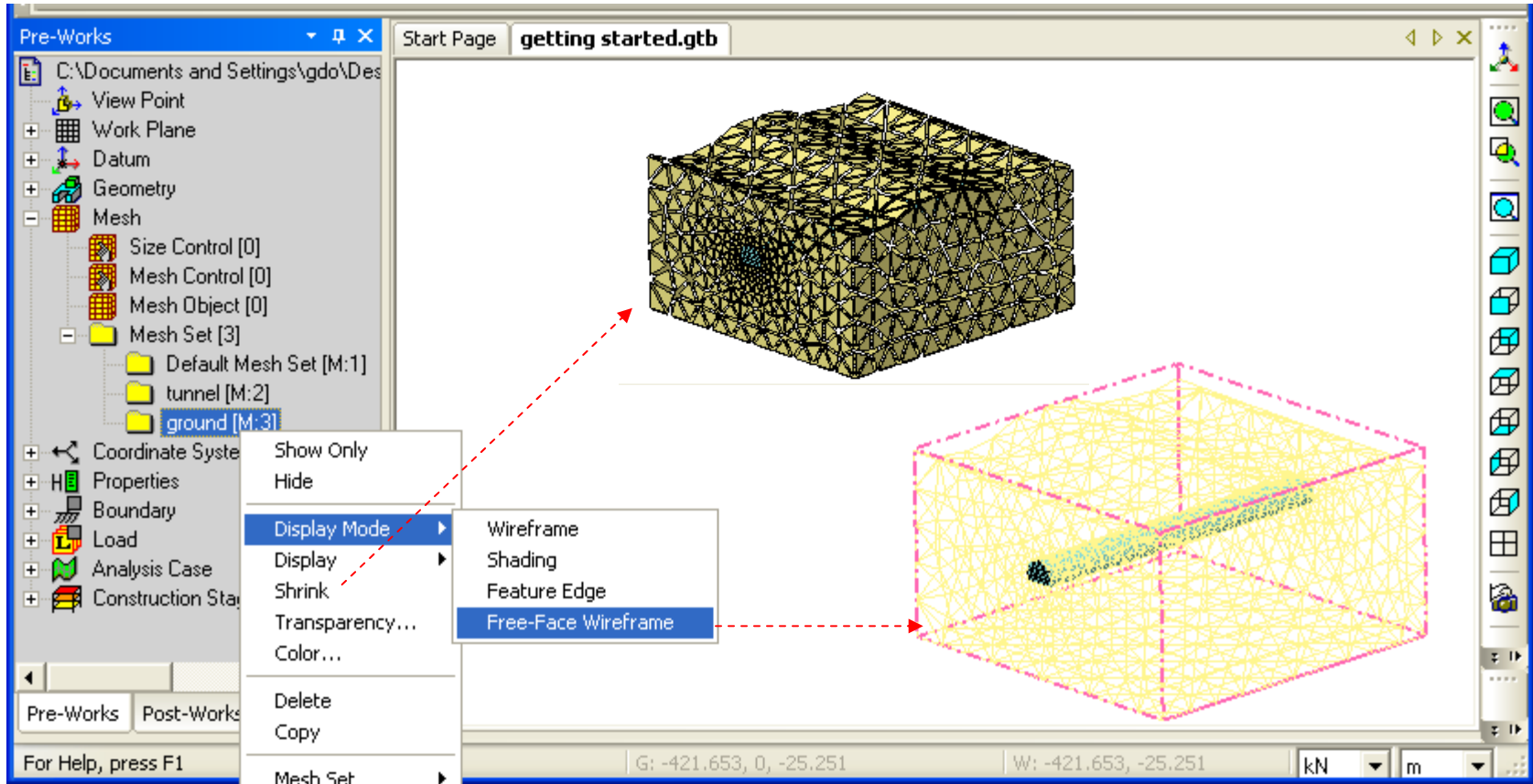
# Display options - Geometry



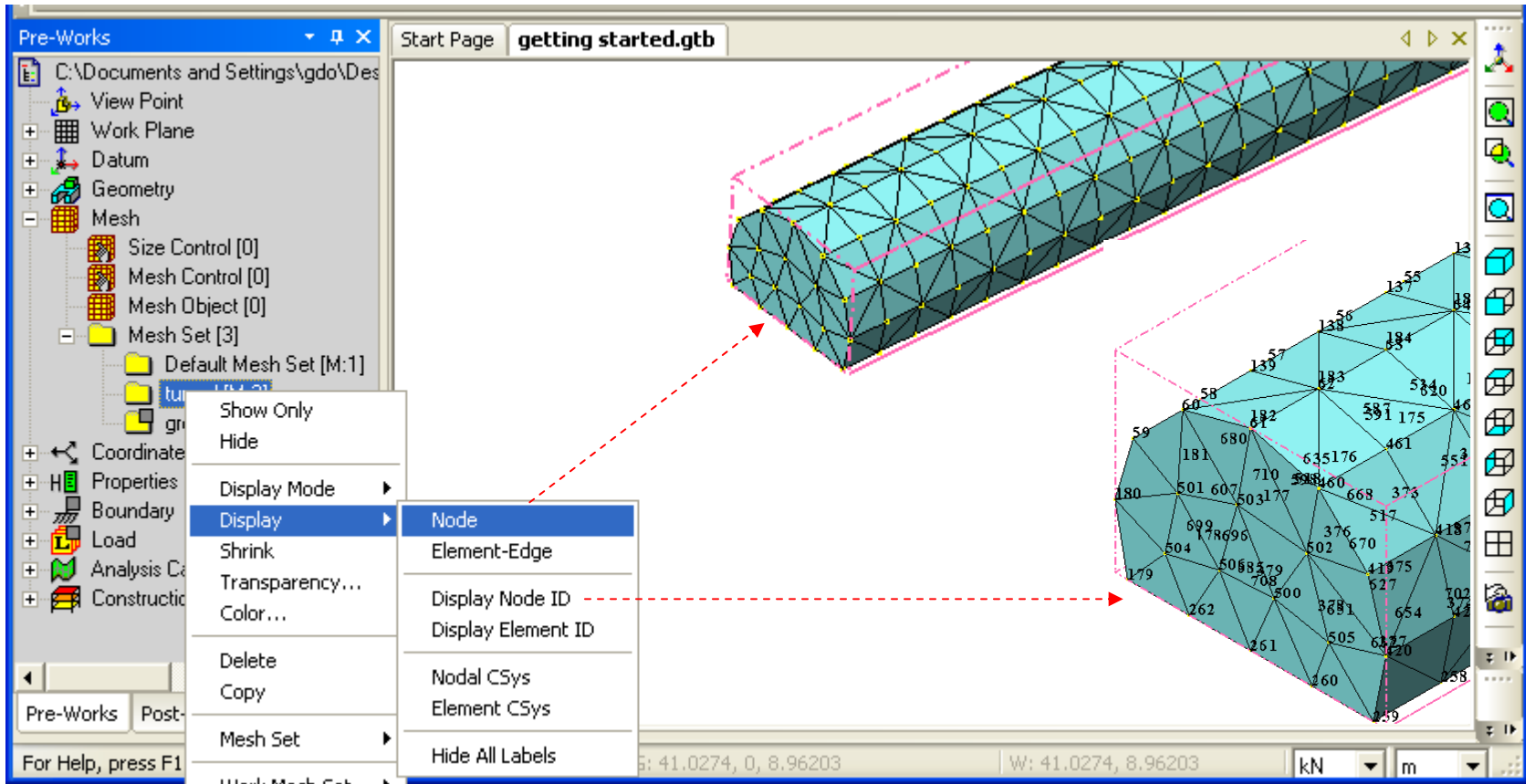
# Display options – Mesh seed on geometry



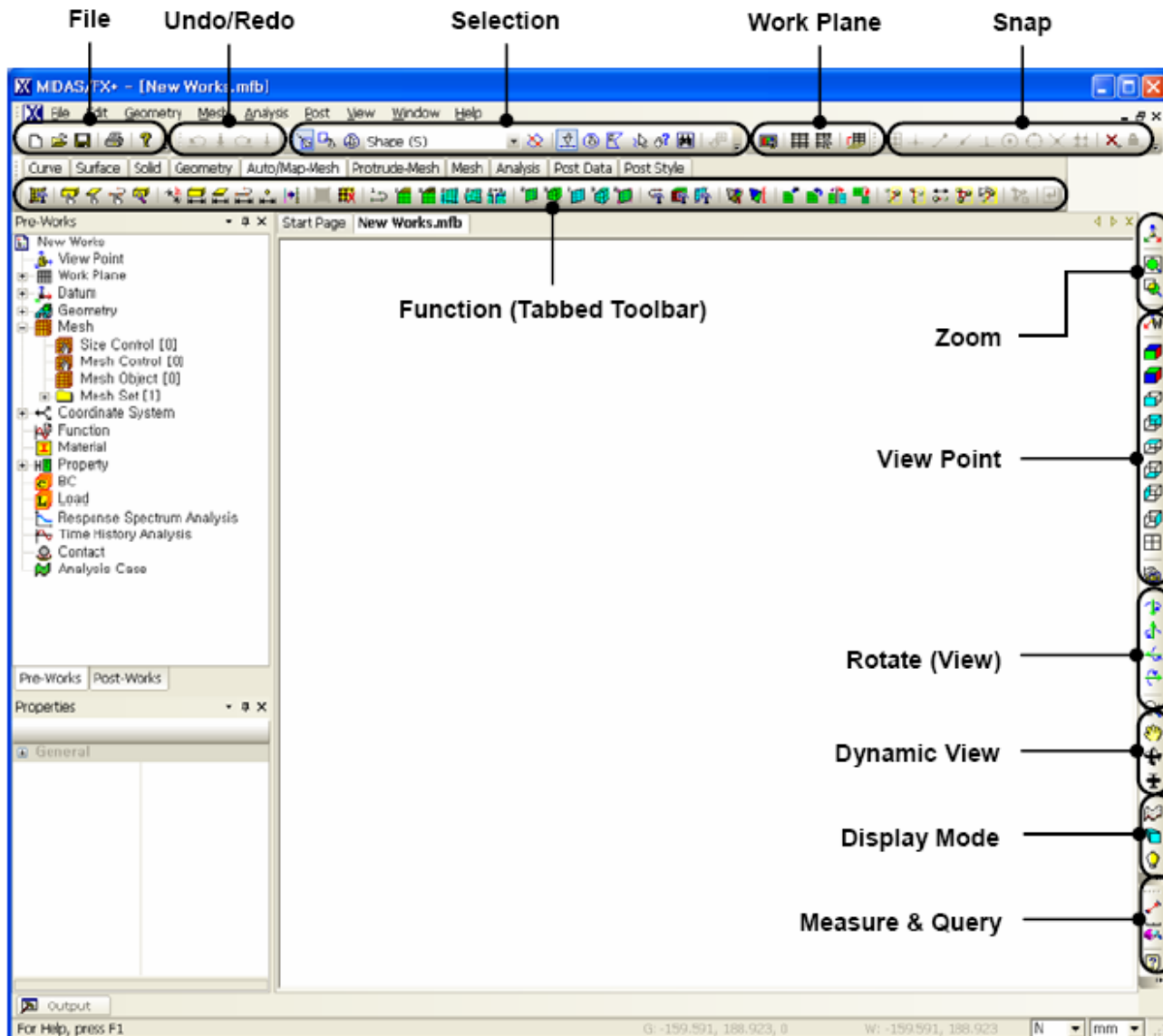
# Display options - Mesh



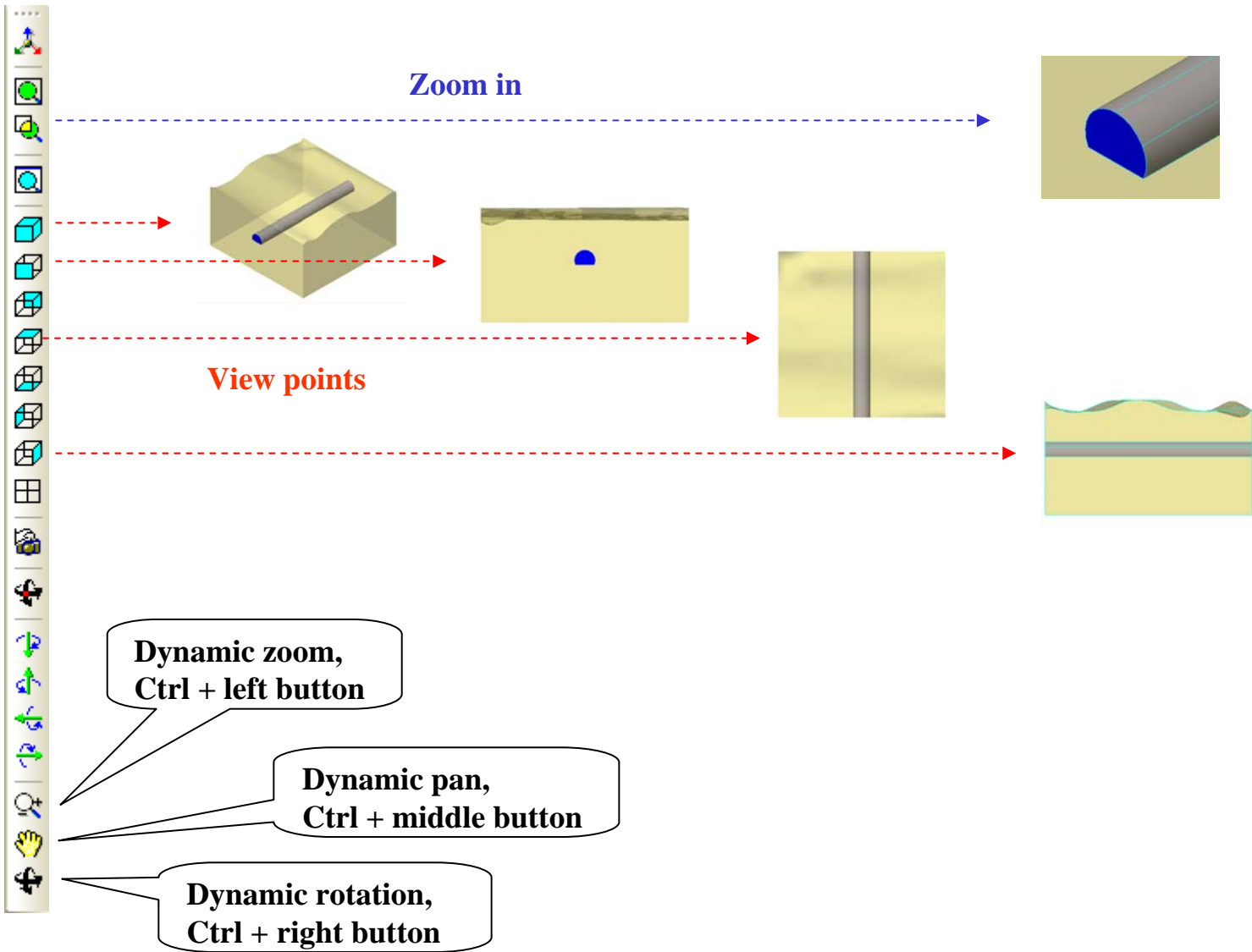
# Display options - Mesh



# Tool bars and Icon menus



# View manipulation



# Work plane and datum



The screenshot displays a CAD software interface with a 3D model of a cylinder on a grid. A context menu is open over the grid, listing the following options:

- Previous Command (Ctrl+Space)
- Toggle Grid
- Grid Setting...
- Move Work Plane... (Ctrl+M)
- Toggle GCS Triad
- Toggle WCS Triad
- Turn on All Triads
- Turn off All Triads
- Hide Datum & WP
- Hide All Labels

Two dialog boxes are open:

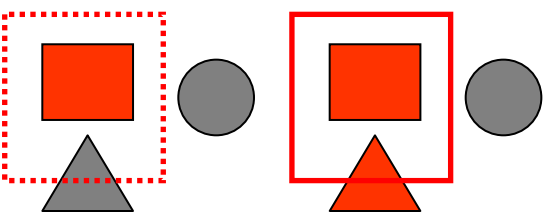
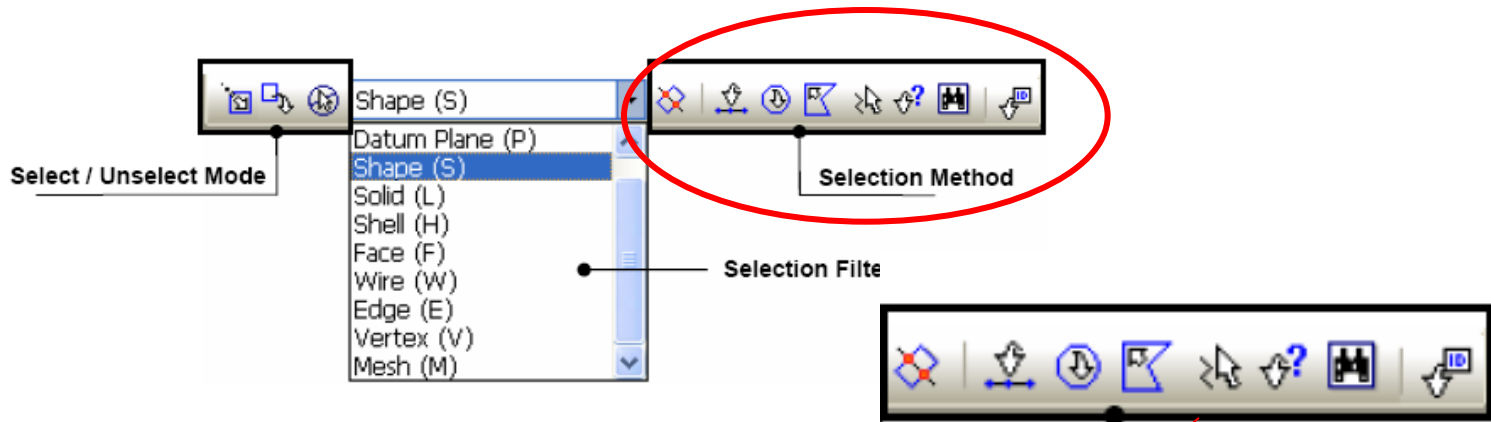
- Rectangular Grid**: Shows Grid Type set to 'Rectangular Grid', Origin at 0, 0, and Display options for Point Grid and Line Grid. The Uniform Grid section is active, with Size set to 20 and Location set to All.
- Move Work Plane**: Shows Ref. Plane set to 'Normal', Translation fields for Dx, Dy, and Dz, and Rotation options for x-Axis, y-Axis, and z-Axis. The GCS radio button is selected.

The left sidebar shows a tree view with 'Work Plane' and 'Datum' sections. The 'Work Plane' section includes XY (0,0,1), XZ (0,-1,0), XZ (0,1,0), YX (0,0,1), YZ (1,0,0), ZX (0,1,0), and ZY (1,0,0). The 'Datum' section includes Origin [D:1], X-Axis [D:2], Y-Axis [D:3], Z-Axis [D:4], XY-Plane [D], YZ-Plane [D], and XZ-Plane [D].

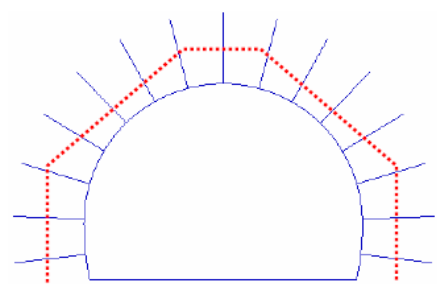
For Help, press F1

G: -237.813, 0, 93.8049

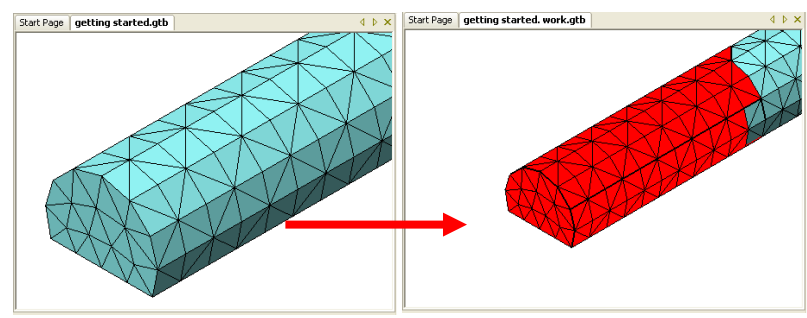
# Selection tool bar – Selection method



**Include intersected off/on**

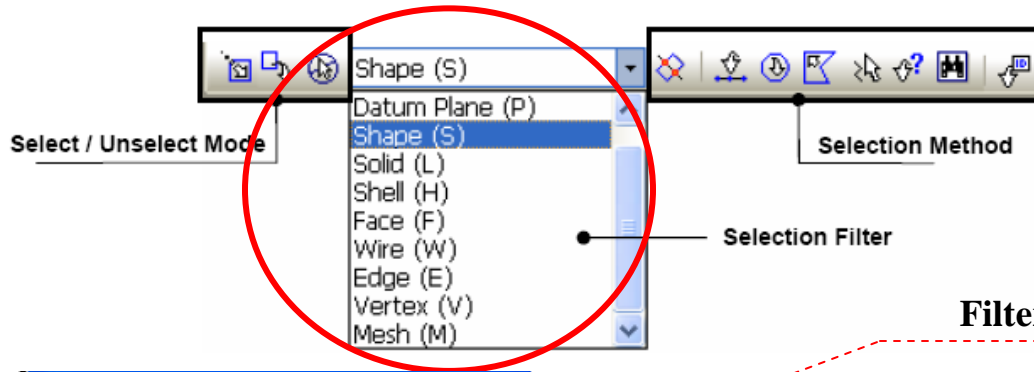


**Select items intersected by polyline**

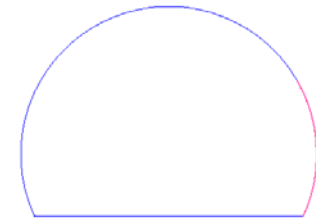


**Select displayed only**

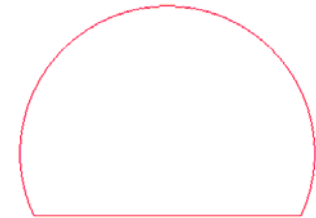
# Selection tool bar – Selection filter



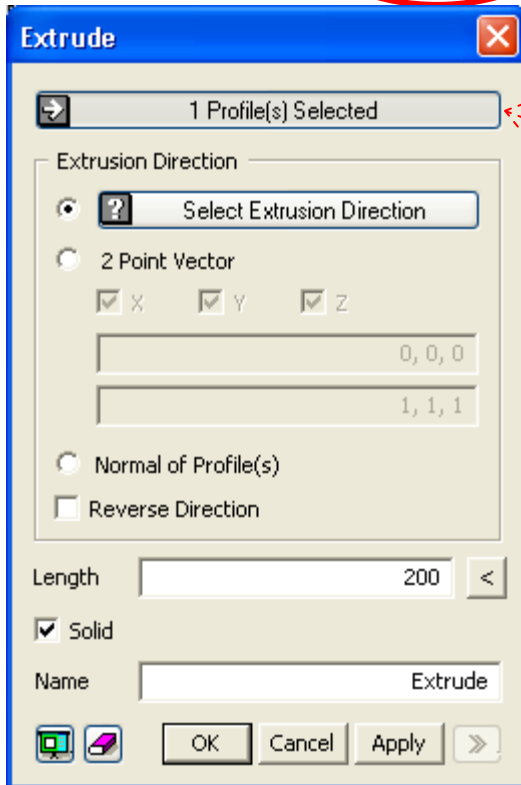
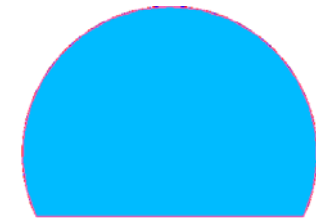
**Filter = Edge**



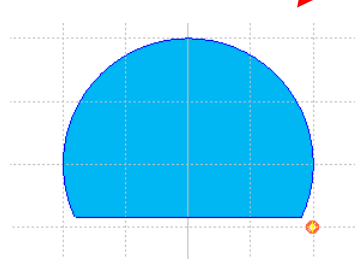
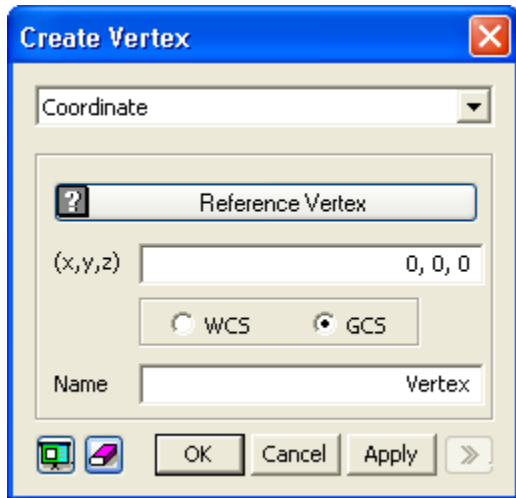
**Filter = Wire**



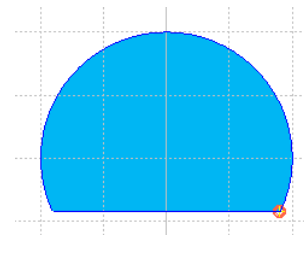
**Filter = Face**



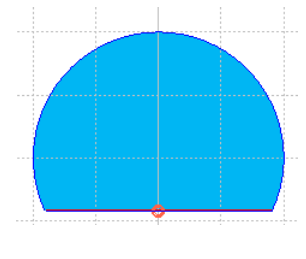
# Snap tool bar



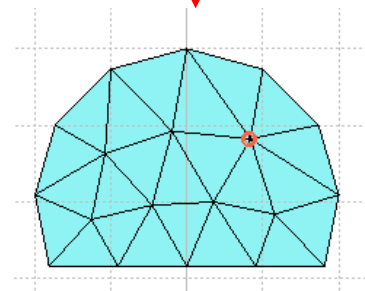
**WP grid snap**



**Vertex snap**

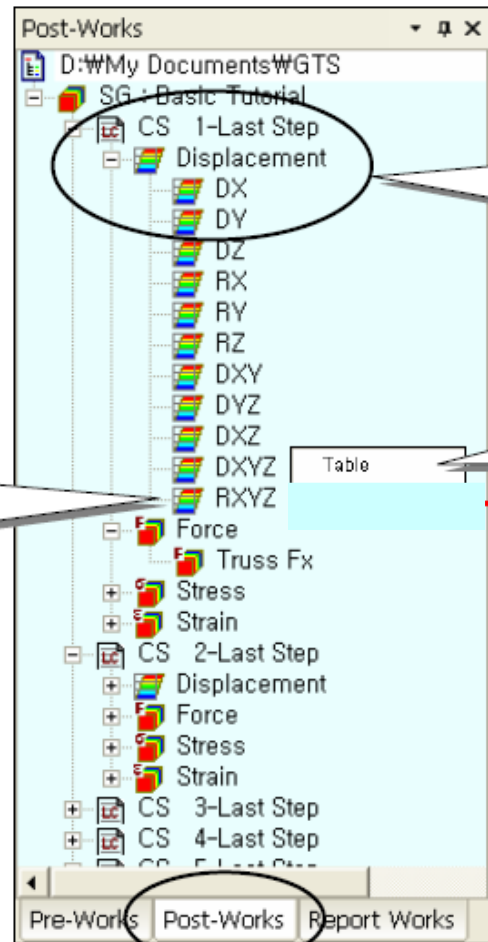


**Middle snap**



**Node snap**

# Post-processing work tree



**Structure of Post-Works Tree**

Analysis Step  
 Result Type  
Result Data

**Provides numerical results in table format.**

**The contour plot can be drawn by double-clicking the result data.**

Table

# Post-processing property window

Properties ▾ 🔍 ✕

**Contour** ▾

Contour Type	Fill
Element Edge	<span style="display: inline-block; width: 10px; height: 10px; background-color: black;"></span> 000000
Element Edge T...	1
Contour Line On/...	False
Contour Line	<span style="display: inline-block; width: 10px; height: 10px; background-color: black;"></span> 000000
Contour Line Thk.	1
Max/Min Value O...	False
Max Value	0.000000
Min Value	-150.000000
Out Of Range P...	Fill
Color Type	RGB
Contour Color 1	<span style="display: inline-block; width: 10px; height: 10px; background-color: red;"></span> 0000ff
Contour Color 2	<span style="display: inline-block; width: 10px; height: 10px; background-color: white;"></span> ffffff
Reverse Color	False
Band Number	20
No Result Entity	Exclude
Coarse Contour	False

Apply

Properties ▾ 🔍 ✕

**Deformation** ▾

Scale Factor	1.000000
Real Displacement	True
Undeformed Sha...	Wireframe
Undeformed Lin...	<span style="display: inline-block; width: 10px; height: 10px; background-color: gray;"></span> 808080
Undeformed Lin...	1

Apply

Properties ▾ 🔍 ✕

**Clipping Plane** ▾

Plane Type	User Define Plane
Datum	XY-Plane
User Define Plane	<input type="button" value="Define"/>
Reverse Clipping	False
Preview	True
Name	
Plane	<input type="button" value="Add"/>

Apply