Chapter 2 Menus

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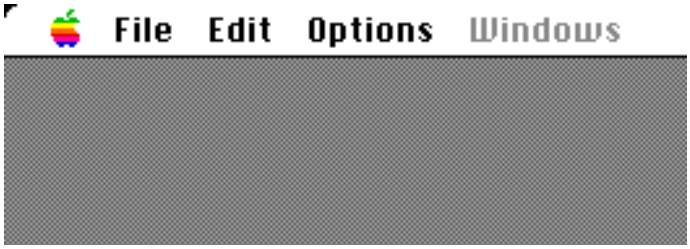
Chapter Overview

The following is a description of the menus available in NCSA Mesher. The menu bar, shown in Figure 2.1, contains the five menus Apple, File, Edit, Options, and Windows. The commands in these menus are dimmed when not applicable.

The NCSA Mesher menus function in the same manner as other Macintosh menus. For additional information about using menus, refer to the *Macintosh User's Guide*.

Figure 2.1
Menu Bar



Apple Menu

The Apple menu appears in all Macintosh applications. It permits access to the Macintosh desk accessories, such as Chooser, Calculator, and Control Panels. In addition, the Apple menu contains the command **`About Mesher`**. Upon choosing the About box, shown in Figure 2.2, the startup Dialog box appears with authorship information, shown in Figure 2.3. To close the About box, click the mouse button or press any key. For more information regarding the Macintosh desk accessories, refer to the *Macintosh User's Guide*.

Figure 2.2
Apple Menu

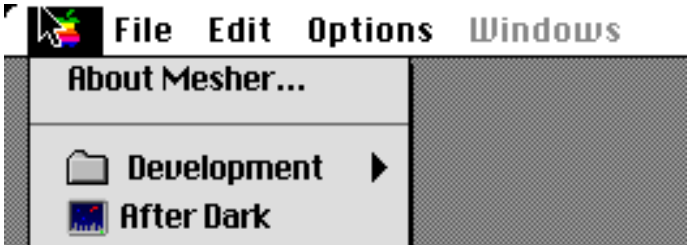
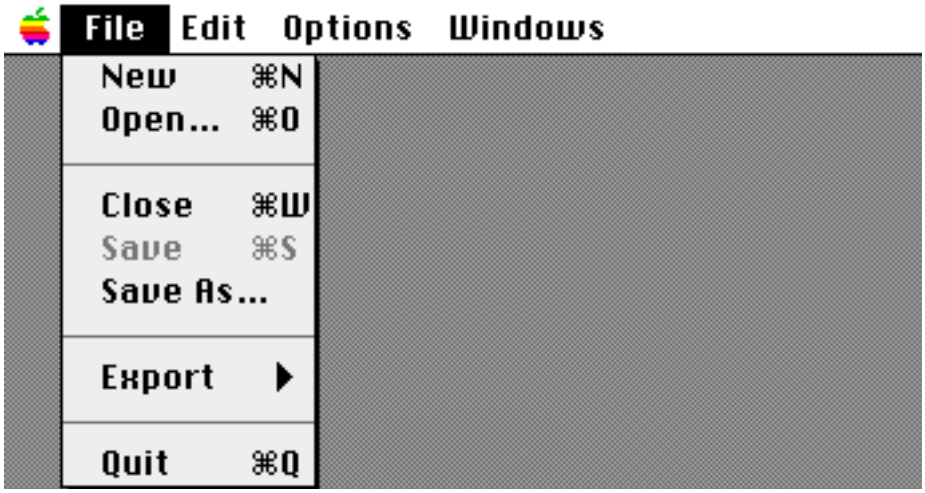


Figure 2.3
About Box

File Menu

The File menu, shown in Figure 2.4, contains the menu options New, Open, Close, Save, Save As, Export, and Quit.

Figure 2.4
File Menu



New

The New menu option creates a document and displays it in the 3D Mesher Window.

Open

The Open menu option loads an existing document and displays it in the 3D Mesher Window. When Open is selected from the File Menu, you are presented with a standard file dialog. From this dialog, you can select the file to load.

Close

The Close menu option closes the document. If changes have been made since the document was last saved, the Save dialog box prompts you to save the document before closing.

Save

The Save menu option writes the current document to the disk. When you save the document for the first time, you are prompted for the location and filename for the document (see Figure 2.5).

Figure 2.5
Save Dialog Box

Save As

The Save As menu option provides you with a way to save the document under a different filename or folder. When the Save As option is selected, you are presented with the Save dialog box (see Figure 2.5).

Export

The Export menu option writes the document to the disk in an alternate file format.

Figure 2.6
Export Menu

Ascii
The Ascii format is simply a dump of the raw data into a text-only file (see format in Appendix A).

VSet
The HDF VSet format is machine independent. It can transfer data to other programs or platforms, such as NCSA PolyView on a Silicon Graphics machine.

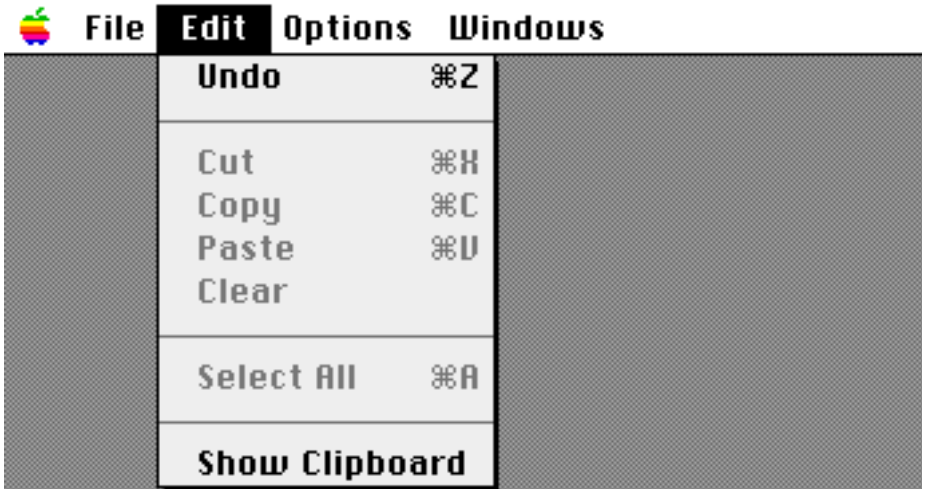
Quit

The Quit menu option exits the application. If the document is open and has been changed and not saved, you are prompted to save it before exiting.

Edit Menu

The Edit menu, shown in Figure 2.7, contains the menu options Undo, Cut, Copy, Paste, Clear, Select All, and Show Clipboard.

Figure 2.7
Edit Menu



Undo

The Undo menu option cancels the previous operation. The operation to be canceled is specified in the menu.

Cut

Dimmed. Not supported in this version.

Copy

Dimmed. Not supported in this version.

Paste

Dimmed. Not supported in this version.

Clear

Dimmed. Not supported in this version.

Select All

Dimmed. Not supported in this version.

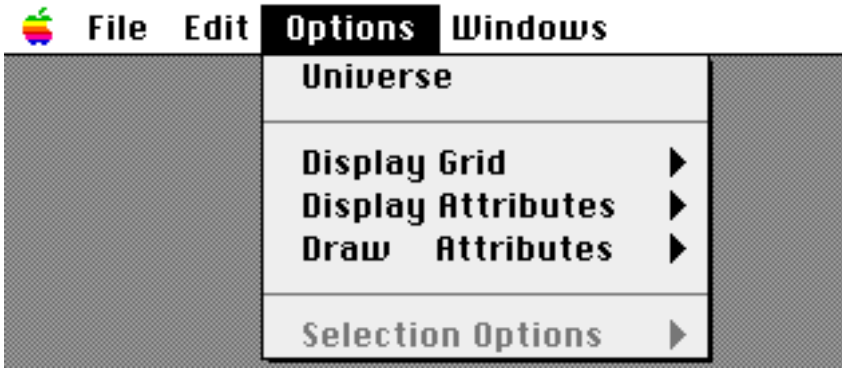
Show Clipboard

Dimmed. Not supported in this version.

Options Menu

The Options menu contains choices for setting the computational space parameters and visual display. These options, shown in Figure 2.8, are Universe, Display Grid, Display Attributes, Draw Attributes, and Selection Options. The options with right arrows have submenus.

Figure 2.8
Options Menu



Universe

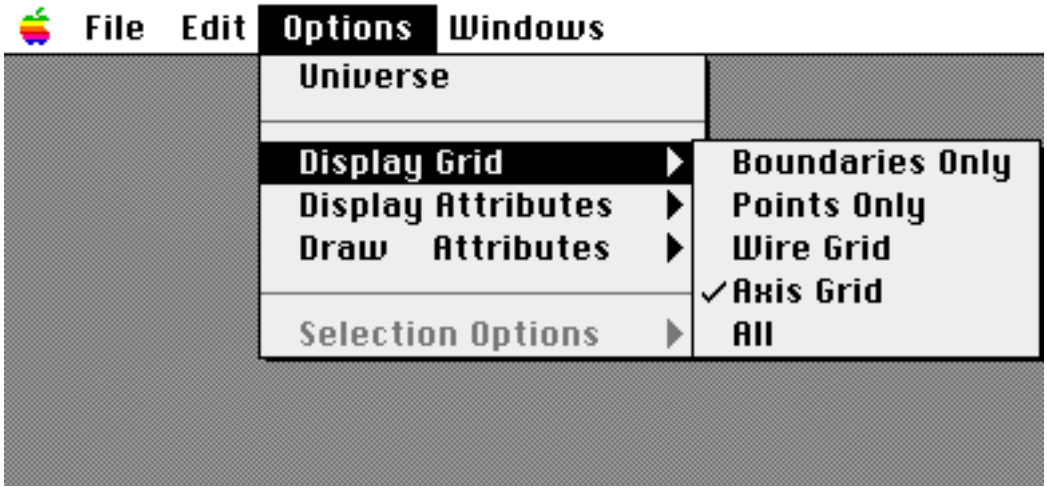
The Universe menu option displays the Universe specification dialog. In this dialog, you define the origin and the size of the computational space as well as the units for the problem (see Figure 2.9).

Figure 2.9
Universe Dialog Box

Display Grid

The Display Grid menu option determines how the grid appears on the screen. A submenu contains the five options Boundaries Only, Points Only, Wire Grid, Axis Grid, and All (see Figure 2.10).

Figure 2.10
Display Grid Menu



The Boundaries Only option shows the wire frame of the computational space.

The Points Only option displays the points for each grid vertex.

The Wire Grid option displays each grid cell as a wire frame cube.

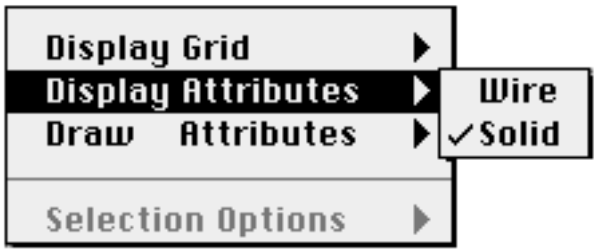
The Axis Grid option shows a wire grid along each of the X, Y, and Z axes.

The All option shows boundaries, points, wire grid, and axis grid.

Display Attributes

The Display Attributes menu option allows you to choose how the styles will be displayed in the 3D View: either as solid filled cubes or wire frame cubes. In either case, the cubes are color coded according to the style they represent.

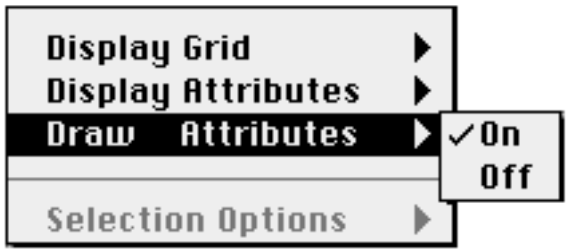
Figure 2.11
Display Attributes Menu


Display Grid
Display Attributes
Draw Attributes
Selection Options
Wire
✓Solid

Draw Attributes

The Draw Attributes menu option allows you to toggle on or off the display of the style data. On a lower-end Macintosh, it is helpful to only draw the cubes when necessary. With the Draw Attributes in the On setting, the cubes representing assigned style data are re-drawn each time the view is updated. Setting the Draw Attributes to Off hides the cubes and allows for faster manipulation of the grid.

Figure 2.12
Draw Attributes Menu



Selection Options

The Selection Options menu option is reserved for later use.

Windows Menu

The Windows menu contains a list of all the currently open windows. To bring a window forward, choose that window's name from the list under the Windows menu.

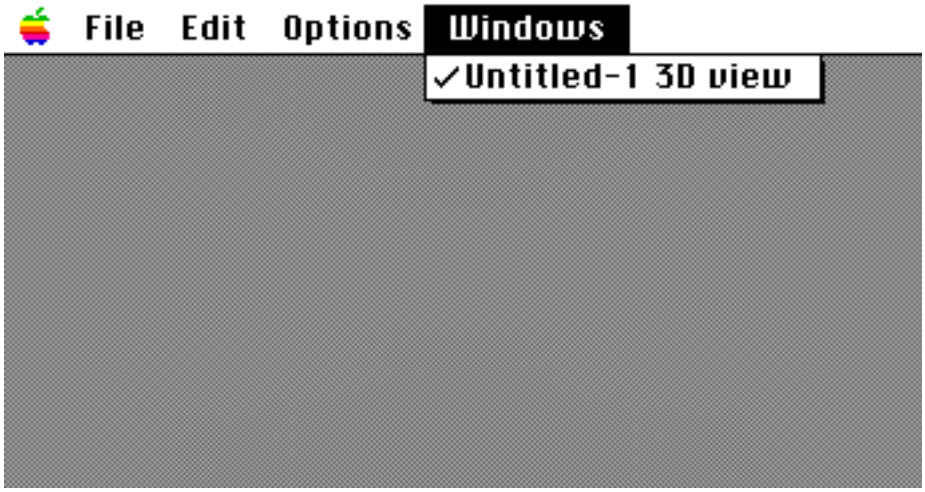



Figure 2.13
Windows Menu