

Sculptura™ Demo

This is a demo version of Sculptura, a new 3D modeling package for Windows. Sculptura is very mouse and visually oriented, making it much easier to use than most 3D programs.

Features -

- Many unique functions to easily create complex, organic shaped objects.
- Based on easy object manipulations using the mouse.
- Solid rendering with shading and smoothing.
- DXF file input and output.
- Support for the Vivid and POV raytracers
- Lots of other stuff...

Sculptura costs \$95 + \$6 2nd day shipping, and can be ordered from:

Robert McNeel & Associates
3670 Woodland Park Avenue North
Seattle, WA. 98103 USA

Phone: (206) 545-7000 Fax: (206) 545-7321

Visa and Mastercard are accepted.

This demo version has file load/save and solid rendering disabled.

All the files in this archive are copyrighted, but may be freely distributed, provided that:

1. The entire archive is distributed complete and unchanged, and
2. No money may be charged for this archive other than the cost of the media.

Requirements:

386sx or better processor
Windows 3.1
4 MB memory
Hard Disk
A 256 color display and a math co-processor are recommended.

Installation:

To install the Sculptura demo, make a new directory on your hard drive and copy all of the files over.

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Example: ( from the dos prompt)
md demo3d
copy a:*. * demo3d
```

Then, to run from windows, either choose "Run" from the "File" menu on Program Manager and type in the program name and path, or double click on the filename from the File Manager.

Sculptura Overview:

Scenes: Sculptura's 3D "world" is called a scene. A scene is made up of a camera, a target for the camera to look towards, a light source, and many objects.

Objects: Each object is composed of **points**, **lines**, and **faces**. Each object also has a "Local Origin", which acts as a sort of center for each object.

Points: A point is a vertex in 3D space. Each point has an X coordinate, a Y coordinate, and a Z coordinate. Points don't define a solid object all by themselves, but they define the structure of an object. Points can be moved around in a variety of different ways to edit the shape of an object.

Lines: A line is a connection between any 2 points.

Faces: A face is a connection between any 3 points. This forms a solid triangular surface.

Viewports: You view and edit 3D objects by using a number of viewports. A viewport is a 2D window that is projected onto the scene. There are 4 viewports to work with - Top, Front, Right, and Camera. All of these viewports are projections of the same scene. For example, you can edit your objects in the Front view, then switch to the Top view to do some things that are hard to do from the Front view. You can edit your objects in the Top, Front and Right view, but the Camera view is for visual feedback only. You can move the Top, Front or Right viewport around by using the cursor keys on the keyboard, and you can zoom in and out by using the "i" and "o" keys on the keyboard.

Using the Sculptura demo:

Creating Objects: When you start the demo up, the scene will be empty, so you will need to add some objects. You can create objects by placing individual points on the screen and building up from there, but that is very tedious. It is much easier to start with a primitive and work from that. Primitives can be found under the "Add" menu.

Using the mouse: There are many effects that you can use to edit the shapes of objects. Some effects perform a function immediately, and some let you use the mouse to interactively edit the object. To use the mouse, you usually move the mouse cursor over a viewport (Except not the camera viewport), and then press the left mouse button down and hold it down. Now, with the mouse button still held down, you can move the mouse around to preview the effect. When you release the mouse button, the effect will be applied to the object.

Selecting Objects: When you want to perform an operation on an object, you must first select it so that the program knows what particular thing you want to apply the operation to. You can select and deselect objects by choosing "Select Objects" from the "Select" Menu. You can then use your mouse to pick objects from the Top, Front, or Right viewports. Change the selection tool by choosing either "Click", "Rectangle", "Circle", or "Region" from the "Select" Menu. To use the region tool, you can hold the left mouse button down to draw squiggly lines, or click the left mouse button up and down to draw straight edges with the same tool. When you are done defining a region, click the right mouse button to end. To select an object, you must capture any of its points or its local origin within your selection tool.

Quick Demo Tutorials:

Demo 1 - adding objects:

Choose "Cone" from the "Add" Menu. Click in the "Top" view with the left button, and move the mouse around while still holding the button down. When you have something that looks about the right size, release the button and a cone will appear. You can add any of the primitives in this way. Go ahead and add several cones from the Top View, and then go on to Demo 2.

Demo 2 - moving the camera

After you have several objects in the scene, choose "Move Camera" from the "Render" Menu. This puts you into move camera mode, so now when you click and hold down the left button in one of the 3 editor views, you will move the camera when you move the mouse. You will get an interactive preview of the camera's view of your objects. The objects will appear as bounding cubes for the time being so that they can be moved in real-time.

Demo 3 - scaling objects:

Choose "Scale" from the "Transform" Menu. Click and hold down the left mouse button in one of the 3 editor views. Now move the mouse up and down to get a preview of what will happen to your objects. Certain effects, like scale and rotate, only pay attention to the up and down movements of the mouse - left and right movements are ignored for these few effects.

Well, that's about it for this quick and simple demo. There are many other commands to mess around with - Random Scale is a good feature to crumple and add bumpiness to objects. Try it with a few spheres. Some of the effects are a little complicated, but most are pretty intuitive. You can constrain most effects to happen only on a particular axis by turning on or off the X, Y, or Z axes. The status bar at the bottom of the screen will tell you which axes are active - you can click on them (the X, Y, or Z) to turn them on or off. Two sample pictures, rings.bmp and scape.bmp are included with this archive. Both were generated and saved completely from the full version of Sculptura in about 20 minutes. They can be viewed with the windows paintbrush program. Both were generated with 256 colors, and will look best when viewed with a 256 color display adapter.

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