

# v o r t

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## the Macintosh™ version

Vort (the very ordinary rendering toolkit) is a collection of programs for rendering and manipulating images. The tools use an image file format that stores color-mapped and direct color images in compact form.

This version is an attempt to bring some of those tools (particularly the ray tracer) to the Macintosh. The package includes two applications:

- v o r t**            The interactive front end in which renderings are made and some of the image utilities from vort can be applied to the result.
  
- a ray tracer**    The raytracer from the vort package.  
                  Although you can, you will usually not use this directly.  
                  Instead, it is launched from **v o r t** when you render.

Both applications should reside in the same folder.

The text file “Art Document Text” defines the scene description language used in the ray tracer. It is from the original **art** manual page.

There are a few example scenes in the Scenes folder. A great many more may be had by anonymous ftp from various sites that carry the vort package. The home site is **gondwana.ecr.mu.oz.au**.

To make a rendering with **v o r t**:

- 1) open or create a scene description file
- 2) select Render->Options and specify the scene size
- 3) select Render->Render and specify the name of the output picture.

**V o r t** will launch the ray tracer. If there are no errors in the scene file, rendering begins, and a progress window showing the scene appears. You can close this window without stopping rendering, and you can Quit **v o r t** without stopping rendering. The ray tracer is a separate application that will go on until you bring it to the front using the Application menu and explicitly Quit.

Let me know if you use **v o r t**. Email bug reports and suggestions to:  
brad@vedge.com

Postcards from down under are welcome:

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# Menus

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## **File->New**

Open a new empty scene description document, in **v o r t**'s simple text editor.

## **File->Open**

You can open text files, vort image files, and Macintosh picture (PICT) files.

## **File->Insert**

Insert an image over the current one. Overlays images. If alpha information is present (if the images were rendered with "output rlea", for example) then compositing is done. Any image smaller than the window can be inserted. This command is useful for assembling image fragments.

## **File->Revert**

Restore the current window to its original state. Discards changes if the window is a scene description, or else rereads the image for an image window.

## **File->Save**

Save the current window to its file.

## **File->Save As**

Save the current window to a new file. If the current window is an image window (a vort image or Macintosh PICT), the file written is a 24-bit image file. You can use this to translate pictures to image files.

## **File->Save Mapped As**

Available for image windows (vort images or pictures). Saves the window as an 8-bit color-mapped image file. If 'Dither->When Saving' is checked, the output image is dithered using Floyd-Steinberg dithering. Dithering can be slow but produces very good results.

## **File->Save Picture As**

Available for image windows (vort images or pictures).  
Saves the window as a Macintosh PICT file.

## **File->Print**

Does nothing, for now. Save images as pictures and print from another application.

## **Edit->Set Background**

Available for image windows. Presents a color selection dialog, and allows you to pick a new background color for the current image. This has effect only if there is alpha information in the image. Note that the change is only to the window; you will need to save the image to make the change permanent.

## **Dither->When Saving**

When this item is checked, any images saved using File->Save Mapped As... are dithered

using Floyd-Steinberg dithering.

### Dither->24-bit Images

### Dither->8-bit Images

### Dither->Pictures

Each item, when checked, activates on-the-fly dithering of that sort of window. The dithering is done by the Macintosh. It is helpful for previewing images.

### Render->Options

Available for scene descriptions. Brings up an options dialog where you set the width and height of a rendering. You can also request that a *fragment* be rendered, by specifying start and end lines and columns. Finally, you can specify a frame number, which is an integer that sets the `frameno` variable that you can use in scene description files.

### Render->Render

Available for scene descriptions. Launches a rendering job. You are asked to create an output file. If you do, then the scene description is sent to the ray tracer. If there are syntax errors, the line number is reported back. If not, then rendering begins. After the first line is rendered, **v o r t** will open an image window showing the image being rendered and the last line number done.

### Render->Pause

Does nothing. Use the system Applications menu to switch to **a ray tracer** if you really want to pause rendering. The renderer is good at cooperating with other programs so you rarely need to do this. As this very paragraph is being typed, the renderer is working away; the word processor has no trouble keeping up with my lightning-fast typing.

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## Notes

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The file type and creator for vort image files are both '**Vort**'. You can import images from other systems; the file format is exactly the same on the Macintosh. You must set the file type to '**Vort**' before **v o r t** will open it properly.

You can quit **v o r t** while rendering. If you start **v o r t** again later while rendering is still going on, simply open the image file in progress. As new lines are done, the progress label will reappear.

Images take up a great deal of memory. Use the Finder Get Info command to increase the memory allocation for **v o r t** if you want to view more or larger images.

The ray tracer is not so greedy. It is set up with about 1.5 megabytes by default. This is usually enough unless your scenes are very complex or use a lot of object files.

If you launch the ray tracer directly, you can open a scene file for immediate rendering. The output image will be rendered using the options from the last time that scene file was rendered. Progress is displayed in a thermometer, rather than by showing the image.

This version does not handle alpha channels in colormapped images; it ignores them.

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