

## Virtual: The Software SIMM

It's really hard to write a review about software like this. I mean if this were a program I could wax eloquent about whether or not it adhered to the Mac interface. I could burn a lot of space running through it feature list and compare it to other programs of the same kind.

Virtual has no features and essentially no interface. There aren't any other programs of it's kind to compare with it. It's sole purpose is to substitute some of you hard disk space for more expensive SIMMs.

The only question is: "Does it work?" It does.

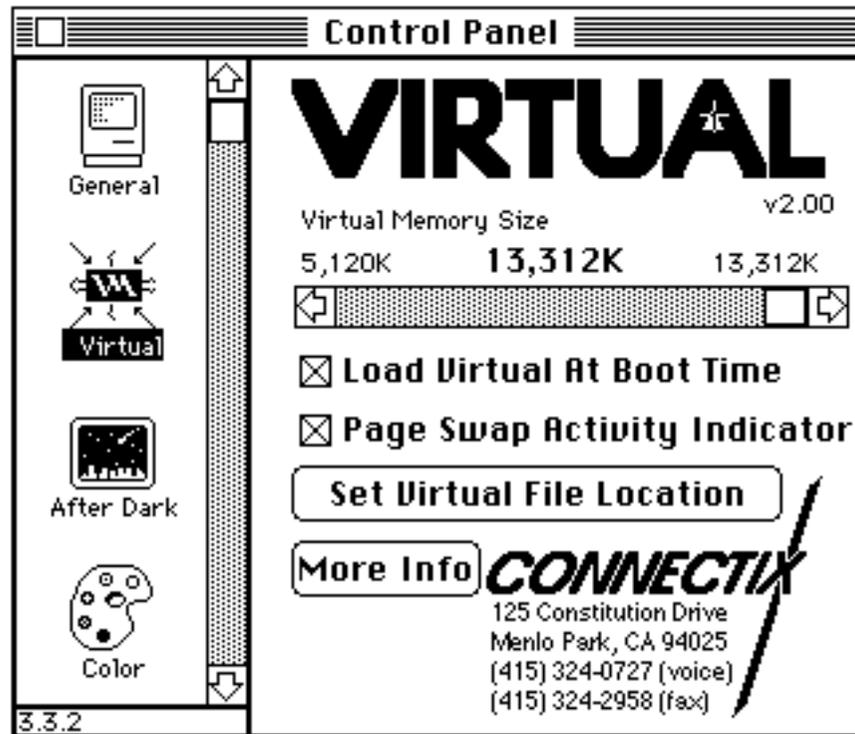
My review copy was version 2.0 for the Mac II. It was published by CONNECTIX CORPORATION. I think it's their only product. It came with a manual, a disk and a PMMU. The disk had the Virtual cdev and a program called "Simple Beep Installer". The manual says that on some systems you may use your beep sound when running virtual and the "Simple Beep Installer" fixes this problem. My beep sound works fine so I've never used this utility.

The author of the manual had some of the problem that I'm having here. The Manual is only 40 pages long, but how many pages does it take to say "Drop the INIT into your system folder."? Actually the manual does suggest that you defragment your hard disk and move all your NuBus cards to the appropriate location which is the right side for a II or IIx and the left side for a IICI or IICX. The manual also exhaustively describes the theory and operation of Virtual. I doubt that most users will read it but it's sort of interesting. I have to give CONNECTIX high marks for documentation although they did let me down in one respect. Virtual puts a locked invisible file, "Virtual Startup," in the System Folder. I don't particularly mind programs doing this but I do appreciate being told about it up front.

You can turn Virtual off in the control panel or disable it at startup by holding down the option key. The manual explains how to get the most out of MultiFinder and other arcana that has also been explained in the Mac magazines. Actually this is kind of ironic because the main advantage of running Virtual is that you can stop thinking about how to get the most out of MultiFinder. As a practical matter, Virtual won't let you run out of memory no matter how inefficiently you use it. What you will run out of is screen space. I have two monitors and I still can get my screen so busy that I loose track of what's where. For awhile I tried diligently to arrange all my windows so I could work in all my apps at once efficiently. This is a losing proposition. It's faster to restart every four hours or so than to spend a lot of time messing with window layout. I solved the problem by switching to MultiFinder 6.1b9. This version of MultiFinder has a "Set Aside" feature that lets you close the MultiFinder layer belonging to a

particular application without closing the application. This version also moves the application list above the DA list under the Apple menu. This is very handy for running this way because you can bring back an application that you've set aside by choosing it's dimmed icon under the Apple menu. I'll upload this version of MultiFinder and the new DA Handler that comes with it with this review. I hope that they show up on the AMUG disks.

Every review needs at least one screen shot. Here is mine:



As you can see, the cdev lets you set virtual memory to less that is allowed by your configuration, though why anyone would want to do that is a mystery to me. Your other choice is to turn off the page swap indicator, an almost unnoticeable blinking pixel in the top left corner of your main screen. On my set up I can get 13 megs but I have two NuBus cards. Your mileage may vary. Virtual does not make any assumptions about the 32 bit cleanliness of system or software so it has to map it's virtual memory into the unused address around system ROM and the NuBus. The more ROM or NuBus cards you have, the less virtual memory you will be able to access. The speed of your hard disk also effects the speed with which virtual can do memory swaps. My VIRTUAL Swapfile is on my cheap HDI 80 meg Seagate. I get DiskTimer II results of 29, 28 and 13 off the thing and this is plenty fast enough to make page swaps virtually unnoticeable. Those of you with Quantum Pro80Ss won't notice the page swaps except in very time critical situations.

To test Virtual's performance in precisely such a situation, I booted up under UniFinder

and started recording an uncompressed 22K sound file off my wife's CD. With 13 megs I could get more than 5 and 1/2 minutes. Virtual really surprised me. I thought it would fill my 5 megs of real memory and then swap a meg, read some more sound data from the MacRecorder, swap another meg and so on. Instead it filled up the real memory and then did 5 fast page swaps. I'm still at a loss to explain this behavior but it's reproducible. The result was five plus minutes of sound with one one glitch that lasts for about a second near the middle. This is certainly preferable to five minutes with several glitches and it is nice to be able to edit sound in big chunks.

Virtual has proven to be rock solid. Your Mac reboots itself the first time you start it after installing virtual but the manual says this is normal. Other than that I haven't had a single crash that I could attribute to Virtual. I haven't had a crash at all except when I tried really weird stuff like editing resources in my system file while both Virtual and Disk Express II were running. Since you, dear reader, are sane, you won't experience any problems with it.

The real question though is "is Virtual worth it?" If the price of RAM weren't falling weekly and if System 7 with 32 bit clean virtual memory weren't due out Real Soon Now, the answer would be yes. As it is, I think the answer is "that depends." The street price of Virtual for the '030 machines is \$125. That's almost enough for two megs at today's prices. Of course there's no way that you can add just two megs to an '030 machine so if you don't have a lot of money and you only have two megs, virtual could make sense. But most people who have an '030 machine do have a lot of money and at least four megs. Unless you are working with big color pictures or lots of sound you probably don't need any more RAM.

Now the Mac II version of Virtual comes with a PMMU and costs about \$200. Since you probably should get the PMMU anyway when System 7 comes out, and since a PMMU costs about \$150 on the street, Virtual is really only setting you back about \$50. As a \$50 utility, Virtual makes some sense even if you are planning to migrate to System 7. Nobody knows when a stable version of System 7 will really be available but it is probably at least six months away. If you have had problems running out of memory, you should seriously consider Virtual.