

# Operating Systems: Are There Only Three?

BY JIM LEISY

**M**y desk sits before a window that looks out on the parking lot of another office building. It is not a bad view. We are located in Oregon, so as you may imagine there are evergreen trees everywhere starting just outside the window and, after a visual leap over the expanse of concrete, continuing on to the horizon. Sometimes, when it's not rain-

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ing, big billowy clouds roam overhead. On those kinds of days it is easy to daydream about the future. On such a day this week my imagination was occupied by the perfect operating system. Of course,

it's not anything like Windows, the Mac OS, or Linux.

No, my perfect operating system would be so much better. For starters it would never crash. It would be backwards and forwards compatible with the software written for it—then and now. Linux, Wintel, or any other OS-tied software would feel right at home. Running legacy MS-DOS applications would be no problem. There would be enough characters for the date function to handle 01/01/10,000. It wouldn't assume I am a brain-dead user, constantly doubting any direct order I gave it. It would do my bidding immediately! This OS would not be overweight and make demands on my already fattened-to-the-max RAM. It would join or build a network after the issue of a single easy-to-remember command! I would no longer have to look behind the Windows curtain

to see why it was not doing something.

It would always be doing it, correctly and without my attention. Maybe I would call it Martini. After all, one good martini is always enough.

The array of commercially available operating systems seems limited. What is installed on the hardware offered by the big companies, the strip-mall independents, or the mail-order companies is usually one of three offerings (the not-quite-ready-for-prime-time fee or free candidates). Didn't there used to be more?

The answer is Yes! And there are many computer scientists who refuse to stop exploring the possibilities. Proof of this is found at a Web site maintained by the University of Arizona (<http://www.cs.arizona.edu/people/bridges/oses.html>). This site monitors

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many of the ongoing research projects in operating systems. The categories covered include:

- Research Operating Systems
- Microkernel-based Operating Systems and Other Similar Systems
- Real-time Operating Systems
- Operating Systems Concerning Quality of Service
- Extensible Operating Systems
- Single-Address-Space Operating Systems
- Object-Oriented Operating Systems
- Reflective Operating Systems
- Persistent Operating Systems
- Operating Systems Using New Compiler Technology
- Language-centered Operating Systems
- Distributed Operating Systems
- Operating Systems for Parallel Machines
- Academic Operating Systems
- Personal Operating Systems
- Commercial Operating Systems
- Free Operating Systems
- UNIX or UNIX-like Operating Systems

Most categories contain six or more ongoing efforts. This is an amazing amount of activity considering how hard it must be to break into the narrowly focused mainstream market. Running through them I did not find anyone exploring the potential for Martini, but I did find some candidates with other catchy names, for example Tunes, Oberon, and Spin. BE OS is listed and, other than Linux, is the most familiar name of the lot.

Over the years, I have acted as a beta tester for several of Microsoft's OS products. For the most part the experience was just fine and in some ways exciting. But what would it be like to take the plunge with one of these up and comers? The main advantage to working with Microsoft is that the workhorse software used at Franklin, Beedle & Associates is compatible. Are there equally viable word processors for Spin? Possibly every publicist's favorite, SpinWrite?

The Association for Computing Machinery has a spe-

cial interest group for operating systems (SIGOPS). This group is related to the activities chronicled by the University of Arizona site. If you have a strong academic/research-oriented interest in OS, you must check out this site: [www.acm.org/sigops/](http://www.acm.org/sigops/).

Don't have enough time to bone up on experimental efforts in operating systems? Then OS News (<http://www.osnews.com/>) is an informative Web resource concerning the world of the commercial OS. Here are abstracts and links concerning the competition among commercial operating systems. Reading over this publication, one realizes that the desktop computer and the company network are less important parts of the vision of the future. Rather, the expanding segment of small, hand-held devices (PalmPilots and cell phones) connected to the Internet is the huge ground-floor opportunity. Sharp is launching an attack with a Linux-derived product. Microsoft is going after this market with a product code-

named Stinger. And the giant German electronics company Siemens selected Psion's Symbian OS for its line of smart phones.

If Linux is a cause for you, then this next site is probably one you have already visited: [www.freeos.com](http://www.freeos.com). On the

*Magic Point is Linux presentation software that takes on PowerPoint.*

other hand, if you're new to this OS and are about to take on teaching a Linux course, then you should frequent it. Here you will learn about many interesting additions to this already very robust (and free) OS. Extensions are being added to it to compete directly with Microsoft. For example, Magic Point is Linux presentation software that takes on PowerPoint.

Grudgingly, I return to the near future. Microsoft continues with the development of Windows in order to propel future revenues. The code name is Whistler. Whistler is the basis for a product named Windows XP, which is pur-

ported to be released during the second half of 2001. XP appears to be the rolled-into-one consumer and business OS that has been promised for some time. This means Windows Millennium Edition and Windows 2000 will be the last scions of the separate product lines. We have the beta for XP and lots of features it will have are not yet available. So it looks like really late in the second half of the year to me. If you want to get an early look at it, visit this Web site:

<http://www.savagenews.com/articles/software/whistler/beta2build2410shots/beta2build2410shots.html>

It is rumored that Windows XP will depart from the current two-dimensional desktop metaphor and go 3-D. This shift is not apparent in the current beta release. However, one has to hope that this is not the big draw. Granted, more multimedia capability and better across-the-board compatibility with the interactive Internet have sizzle. But at this point I would settle for a bullet-proof product that wouldn't crash—at all!