

Roger Sessions



Point



A Lesson from Palm Pilot

They say the batteries last about two months. I bought my Palm Pilot Thursday, and my son and I have been using it almost nonstop since then. Here it is Tuesday, and I just replaced the batteries. The fact that it takes three times as long to enter an engagement on my Palm III as on my laptop running NT is of no consequence to me. It is more fun on the Palm Pilot—and I don't care how quickly I wear out the batteries.

There are three reasons I believe the Palm Pilot will succeed: it solves a real problem, it is technology guided by a vision, and its economic model makes sense.

Linux, in contrast, fails in all of these areas. Let's consider them one at a time.

Solving a real problem

It is not enough for Linux to be cute and interesting. Ultimately technology must solve real problems. Exactly what problem does Linux solve?

As far as I can tell, Linux proponents believe they are solving the problem of operating systems being too expensive. The fact is, for large corporate cus-

tomers running serious NT-based systems, the cost of the OS is negligible compared to the cost of the hardware, programming staff, support staff, and purchased software. Microsoft is focusing on a much more significant cost, that of system administration.

Vision

The fact that we are even having this debate tells me that Linux defines itself as anti-Microsoft. But this is not a sustaining vision. A product needs a positive, well-articulated "sense of self" to thrive.

Microsoft's vision for NT is to provide the foundation for tomorrow's distributed, Web-based commercial applications. Most of its products are built around this unifying vision. The product designers understand their role in the overall NT drama.

I see no such unifying vision from the Linux community. Its markets appear to be niche, sporadic, and unfocused. Is it a home OS for Unix programmers? A Web server for academic institutions? A cool engine for those who like to tinker under the hood? These

Continued on page 38

Continued from
page 36

are interesting but financially unimportant markets, and none are likely to sustain Linux over the long haul.

What's the economic model?

I know how to make money on NT. I have serious tools to build products and a huge customer base over which to amortize my costs. I have interoperability support from the OS to allow my systems to work with those of other vendors. Linux has few tools, a relatively miniscule potential customer base, and no standards for interoperability. I can build systems for Linux, but I just can't make money doing so.

Apparently, nobody else can make money on Linux either. The only company I can find making a profit on Linux is Red Hat Software. According to InfoSeek, Red Hat had \$5 million in sales in the entire fiscal year. Microsoft, in contrast, surpassed \$5 million in sales in the first three hours of the fiscal year. And ironically, Red Hat made most of its money doing the one thing that is anathema to the Linux community: charging money for the OS, just like Microsoft!

If the Linux community wants to compete with NT as a commercial platform, it has a lot of work to do. Commercial applications have demanding requirements, and businesses are not likely to trust these requirements to an OS built by weekend hackers.

NT is addressing the serious needs of commerce by developing infrastructures based around component technology and transaction processing monitors. The core of NT's infrastructure will be based on COM+, combining much of the middle-tier infrastructure support today found in several

Microsoft products. COM+ will have the widely supported component model of COM, the distribution model of DCOM, the scalable runtime environment of the Microsoft Transaction Server, the asynchronous communications model of MMQ, and the distributed transaction framework of MDTC. And COM+ will add functionality lacking in NT today, the most important of which is load balancing of component instances across machines.

The final requirement business places on its systems is support. Who supports Linux? When a major brokerage firm is losing a million dollars a minute while its system is down, who does it call? Red Hat? And what is Red Hat going to say when it finds out that the problem is in a hack that some corporate programmer, now long departed, decided to make to the scheduling algorithms of the brokerage firm's OS, thanks to the easy availability of the Linux source code?

The Palm Pilot has proven that you don't have to be Microsoft to be successful. But you do have to find a real problem to solve, a vision for solving that problem, and a financial model that allows people to make money supporting that vision. If the Linux community wants to be taken seriously, it needs to learn these same lessons. ❖

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BOB RESPONDS

Roger Session's Pilot essay makes a bunch of assumptions:

1. "As far as I can tell, Linux proponents believe they are solving the problem of operating systems being too expensive."
2. "The fact that we are even having this debate tells me that Linux is defining itself as anti-Microsoft."
3. "Red Hat made most of its money doing the one thing that is anathema to the Linux community: charging money for the OS..." They are all fundamentally wrong, but I sympathize with Roger—this model is not intuitively obvious to those who think they know how software should be developed and deployed.

The real error Roger made is that he confused Linux with an OS. Linux is not an OS, it is simply a kernel. A brilliantly designed, robust, reliable kernel, but a kernel nonetheless.

The word "Linux" has come to be used for all the open-source software developed over the last 30 years, much of it as additions to the Unix OS. Few Linux users have the skills necessary to download some 400 programs (including, for example, the Linux kernel), compile, link, and verify a fully functioning OS.

This is where folks like Debian, Slackware, and Red Hat come

in. We build an OS out of open-source programs along with several dozen programs we build ourselves. In effect we play the role of the car manufacturers, who take tires from Michelin, airbags from TRW, and paint from Dupont to build Ford Taurus and Honda Accords. So, to do a fair comparison of a Linux-based OS against another OS, you must first choose a Linux-based OS.

I do not have space to explain how Roger's assumptions went astray, so my advice is just to sit back and watch.

1. The benefit to Linux is not cost (although its low total cost of ownership is pretty impressive).
2. Red Hat does not define itself as anti-anything.
3. The economic model driving this is as robust as the OS it is creating. An OS that can win industry awards against those built by the world's biggest software companies does not happen by accident.

Oh, and one more false assumption in Roger's essay: "According to InfoSeek, Red Hat had \$5 million in sales in the entire fiscal year." That quote would have been referring to an "entire fiscal year" of a couple of years ago.