Fred Cohen **& Associates** - Analyst Report and Newsletter
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User Platform Selection Revisited

In 2007, we did an analysis of the three realistic options for user platform selection; Microsoft Windows, Apple OS-X, and Linux. The rankings at that time favored OS-X with a tie for Windows and Linux. But the times they are a changin. Here, based solely on the opinions of our analysts and their research results are our updated results. A lower ranking is better (1st, 2nd, 3rd) in each category.

Ease-of-use: Average users use it with minimal effort and support, and it works without looking anything up.

Compatibility: It works well for average users on a daily basis for things they do, and allows easy interchange with other systems.

Risk: Malicious things don't happen in normal use to average users.

Availability: Useful work can be done most of the time the computer is on. This includes the need to reboot for upgrades and updates and backward compatibility with previous versions.

Total cost of ownership: Over the life of the system, the total out of pocket cost the user pays, for the amount of useful work done.

Support: On the standard manufacturer support contract, the user spends less time, effort, and frustration before the problem is favorably resolved.

Privacy: This rating deals with the extent to which the vendors collect data from the users and systems, and the extent to which you location, what you are doing, and similar private data is exchanged with the vendor and potentially used for advertising or other similar purposes, generally to the advantage of the vendor and the disadvantage of the user.

Criteria	Windows	OS-X	Linux
Ease-of-use	3	1	2
Compatibility	2	3	1
Risk	3	2	1
Availability	2	3	1
Total Cost of Ownership	2	3	1
Support	2	1	3
Privacy	2	3	1
Lock-in	2	3	1
Coolness	3	1	2
Overall (lower is better)	21	20	13**

Operating environment ranking by criteria

Lock-in: This is the extent to which the user or organization gets locked into the vendor by using their products. Lock-in is closely related to compatibility but also deals with openness, the release of formats, the requirement to do upgrades, and so forth.

Coolness: Your mom will say you're cool is you use this operating environment. Mobility and the integration of mobility with operating environments is also a big part of cool today.

Windows

Windows is still the least secure system, and it continues to be so bad that most normal users cannot realistically use it for more than a few days on the Internet without it being broken into and exploited by malicious attackers. The applications don;t crash as much as they used to and operating system crashes are almost rare (unless you upgraded recently), it is still hard to configure well and use in changing environments (like wireless access points and plugging into different networks), but this is improved over what Windows used to be. Manufacturer support contracts are expensive and most people go to independent contractors who have limited in-depth understanding. It is also the most popular environment on the planet, which is why most vendors try hard to be Windows compatible. Microsoft used top be thought of as the privacy devil, but this is less true today than it used to be. It may not be that Microsoft is doing better, because all such things are relative. Microsoft is far less lock-in oriented than it used to be, and this is goof for its users. It is not, however cool regardless of how hard the marketing folks at Microsoft might try to make it so.
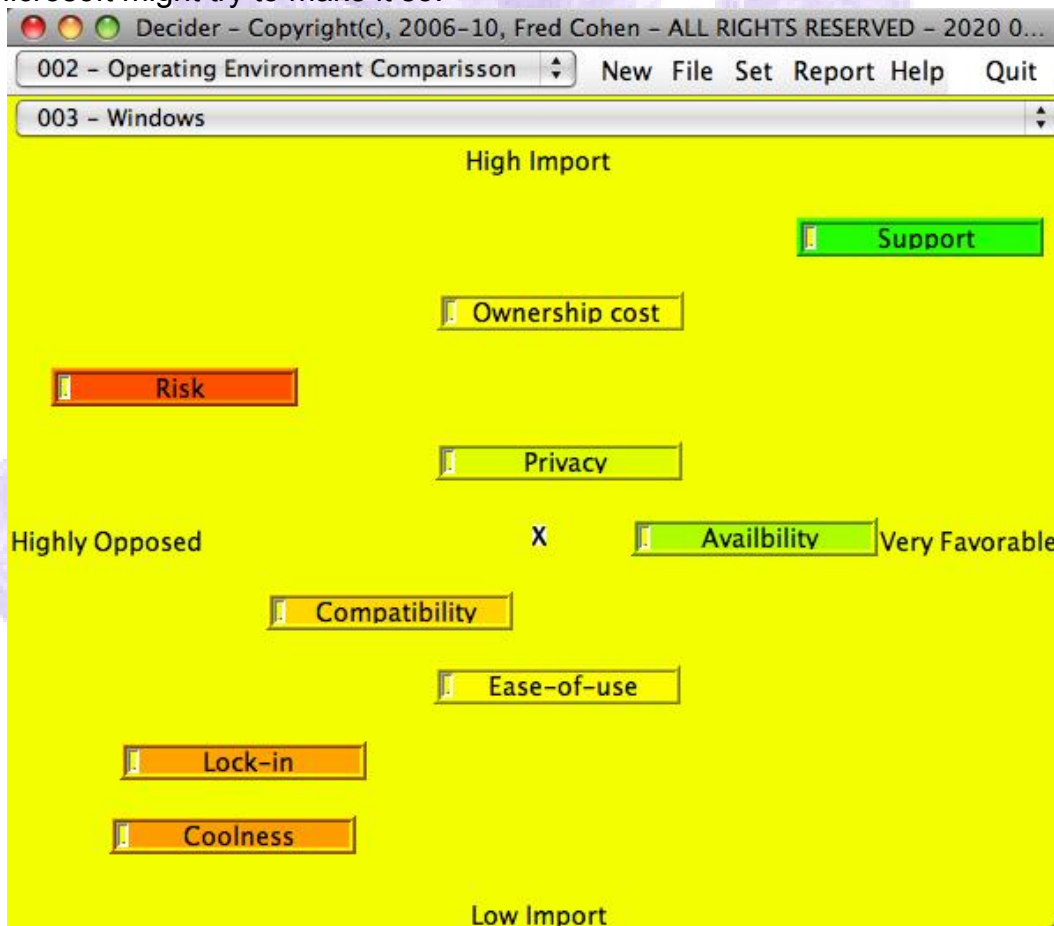

Figure 2 – Windows and the reason for its ratings

Putting more of a metric on the situation, it is clear that Windows is a middle of the road choice. Not too good, but not too bad. Of course you might have different priorities for what is important to you, and this would change your overall evaluation.

Linux

Linux is relatively safe in that it is rarely broken into in normal user uses, and configuration has dramatically improved over the last few years, to where a normal use can simply install or turn it on if pre-installed (which it increasingly is) and use it without any substantial effort. Linux is down-right easy to use at this point, in many ways better than Windows, and coming up quickly on OSX, but support is still hard compared to the alternatives. Linux almost never crashes, but it is not quite as good as it used to be, probably because it is becoming more and more functio0nal for the average consumer. It is, perhaps for these reasons, becoming far more popular and consumer friendly, including increased use on mobile devices, where it has now surpassed Windows mobile. It has an enormous amount of software available for it for free, and increasingly, this includes things that most users use most of the time. It also has for-fee software compatible or reasonably so with other platforms. While you still can't buy Microsoft Office for it, it has simple-to use virtual machines that can run Windows quite well, including the office suites, and OpenOffice is far more compatible with Microsoft Office than it used to be. Privacy under Linux is a high priority and relatively little information is exchanged with vendors today compared to the alternatives. Lock-in is also minimal, and essentially all formats are portable to other platforms, largely because it is almost all open source. Linux is increasingly cool, particularly on mobile devices. It may soon surpass Apple for many users.
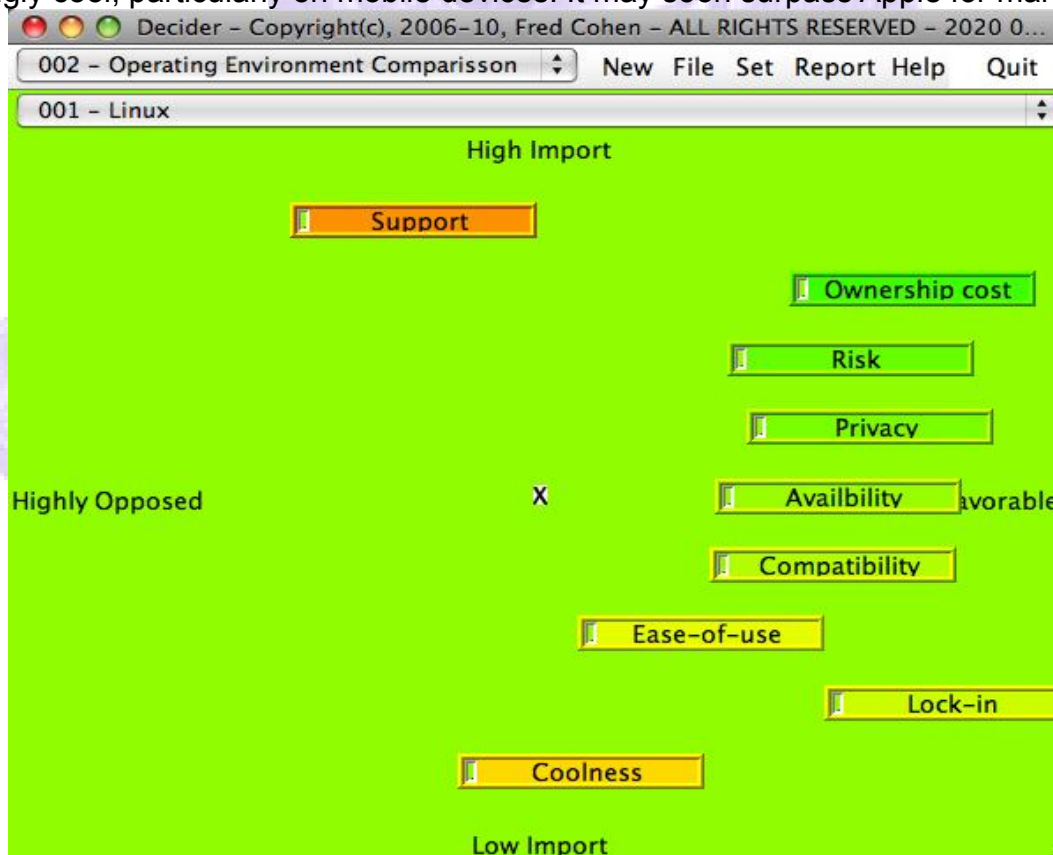

Figure 3 – Linux and the reason for its ratings

Almost no matter what your priorities are, Linux looks to be the leader today, but this view is a bit tainted... by experience with all three...

OSX

OS-X is almost never broken into in normal user use, it is relatively easy to use, and very easy to configure, largely because of its hardware lock-ins. OSX seems to crash a bit more than it used to, and it often requires reboots for security and other upgrades. It is still well supported with the standard Apple Care program, although the fees drive up the total cost of ownership. Apple has lost the confidence of most security experts when it comes to privacy. OSX seems to eternally contact Apple indicating everything from what programs are installed to memory areas associated with applications when they crash. With .MAC (now .ME) it is taking ahold of more and more data, providing convenience, at the cost of privacy. It runs almost all of the free software that runs under Linux, albeit with some extra effort. It runs Microsoft Office, but not as well as Windows. It almost always connects to wireless and wired access points with minimal effort and it helps nicely when it has a connection problem. Privacy and lock-in are increasingly lowering the trust in Apple as a partner who won't exploit your personal data or use your use to keep you buying more and more exclusively from them at ever increasing prices. But when ti comes to cool, Apple remains on top.
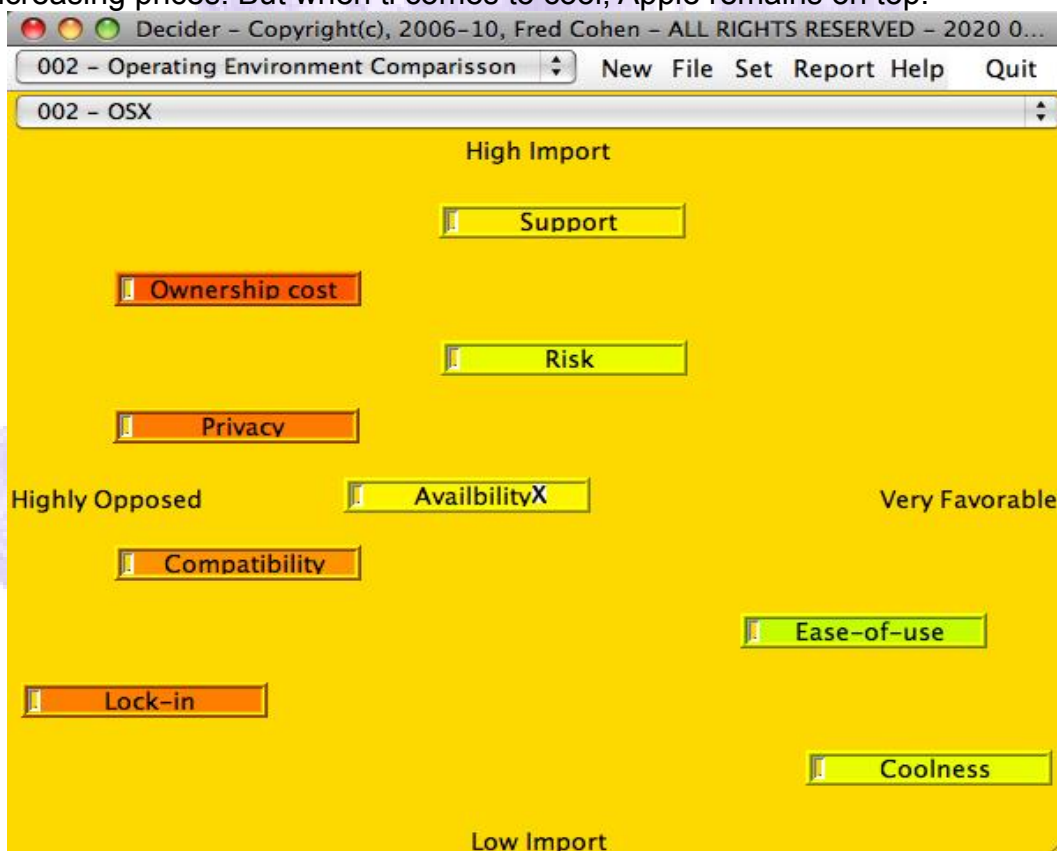

Figure 4 – OSX and the reason for its ratings

Apple remains the choice for artists, geeks, and guru wanna-bes who like convenience but still want to do things that Windows won't let them do well or easily. But it has lost much of its luster with the increasing quality of Microsoft and Linux distributions and its own increased forces toward lock-in, incompatibility, concealment of content details, automatic alteration of anything it touches, and the list is endless. Still excellent – but slipping – and no longer #1.

Summary and comments

We are not dogmatic about technology. We have no deeply held beliefs about any company or operating system, and our views change over the years as the operating environments change. Nobody is paying us or otherwise remunerating us for our point of view. If you look at our views from two years ago, we told you something quite different, and in two years things are likely to change again as will our opinions, based on those changes.

> ***Linux is the operating environment of choice today.***

So now that we have told you this, you probably have some objections to overcome. Here are the most common ones and how we were convinced along with most other industry analysts to go to Linux for our use.

But my software requires Windows: You can run Windows and Windows applications within the Linux and Apple platforms using emulation software from many vendors. Many of the most commonly used functions are available in native linux applications, and many of those work as well or better than the commercial versions. You can also use the Remote Desktop Connection to connect to Windows servers for Windows applications and this is commonly done. You can run many OS-X application equivalents in Linux as well. And Linux on a netbook works very well, which means that for less than $300 you can now get a quite capable Linux platform that works better, faster, and cheaper than the alternatives. And of course you can still dual-boot your netbook to Windows!

But my company won't support it: They will. There is more or less a revolution going on from the bottom up and top down within companies of all sizes. Windows is no longer dominant in all computer support and Linux is increasingly well supported. Linux is good for users and better for infrastructure – except in large enterprises, where Windows still has an edge for user platforms.

But I have to make sales presentations and our customers run Windows: Linux lets you run Windows in a virtual window if you want to, but in fact, it presents pretty darned well. For canned demos, you can prepare the Windows virtual machine so it erases all of the changes made during each presentation. Then, when the Windows machine gets a virus from being on the client network, you can reboot it and your demonstration will work the next time exactly the same way it did when you configured it.

But the boss said no! Sorry, we cannot help you there. Give a copy of this article to your boss, explain that the company might save a lot of money and eliminate the vast majority of problems they are having with computer support, and that it won't interfere with the way you do business at all. Other than that, you will simply have to wait for a better boss.

But... Rest assured that for every objection you can find, there's a rational answer that, while imperfect, is good enough. User platform selection involves tradeoffs. Like everything else, you have to make decisions based on the facts on the ground today in your specific situation. In our view, the tradeoffs today for most people say to choose Linux for now.