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LAST UPDATED Monday, November 4 at 1:16 PM PST.

BUSINESS

Be open:



Be Inc.'s CEO, Jean-Louis Gassée, left, and freelance writer Simson Garfinkel discuss the BeBox and the BeOS.

An exchange of views on the BeBox

WHEN Simson L. Garfinkel, a regular freelance writer for the Mercury News and a former programmer for Next Software Inc., received a copy of the new "BeBox" and "BeOS," he wrote a review of the Be system. His review took the form of an open letter to Be Inc.'s CEO, Jean-Louis Gassée. In turn, Gassée, the fiery former head of Apple Computing Inc.'s revered R&D division during the '80s, responded with a review of Garfinkel's review. "You're going to need all the help you can get getting this new plane off the ground. And you don't have much time," Garfinkel warns. "It was not, and is not, our company's mission to replace existing operating systems or to become the next major force in computing," Gassée responds.

- ◆ [Simson Garfinkel's letter](#)
- ◆ [Jean-Louis Gassée's letter](#)



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A. Click here.



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NEWS

Hoax e-mails are newest

NEWS

Gaining ground

method of Net attack

ONCE, online pranksters were content with sending fake postings and ads or spamming. Now, attackers are using a disturbing combination: hoax e-mails. On Oct. 21, thousands of Net users got what seemed to be an e-mail soliciting child porn. But many Net experts say it was either a hoax or a smear against the supposed author. "It's the online equivalent of a drive-by shooting," said a computer security expert.

- ◆ Story by Mercury News Staff Writer Michelle Levander



Bob Dole stands inside a mock boxing ring while campaigning in Las Vegas.

Mercury News photo by Meri Simon

Prop. 209, Dole rise in poll

THE ANTI-AFFIRMATIVE ACTION Prop. 209, which has become increasingly partisan in recent weeks, has regained a commanding lead in the latest Field Poll as Californians' support for President Clinton has dipped. Clinton still retains a double-digit lead over Bob Dole, but his standing has slipped below 50 percent. Simultaneously, support for Prop. 209 has gone up; it now leads 52-38 percent with 10 percent undecided. Stay tuned to VoterLink on Election Day for results and stories updated throughout the day.

- ◆ Poll: Prop. 209, Dole gaining ground
- ◆ Dole zips into state one more time
- ◆ VoterLink

advantage?

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Breaking News

About News Break

EX-CRIME LAB BOSS GLOSSES OVER DISCREPANCY

SANTA MONICA, Calif. (AP) -- A crime lab supervisor today glossed over a big evidence gap in the O.J. Simpson case -- one of the discrepancies that laid the foundation for a police frame-up theory and helped win Simpson's acquittal on murder charges.

POLICE ARREST MAN LINKED TO CHILD-PORN RING

TORONTO (AP) -- Following up on an FBI investigation in California, police reported Monday they arrested a 22-year-old Ontario man linked to an international child porn ring that distributed material on the Internet.

YELTSIN'S OPERATION MAY BE WITHIN DAYS

MOSCOW -- President Boris Yeltsin's doctors said today the Russian leader's heart operation "can be performed within days." No exact date was given.

COURT DOESN'T REVIVE STUDENT-LED PRAYER

WASHINGTON (AP) -- The Supreme Court today refused to revive a Mississippi law that would have allowed student-led group prayers in public schools -- at assemblies and sports events and even in classrooms.

SECOND U.S. PILOT FIRES AT IRAQI MISSILE SITE

WASHINGTON (AP) -- Two U.S. F-16 pilots who fired missiles at Iraqi radar sites believed they were being targeted by Iraqi missiles, Defense Secretary William Perry said today.

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MERCURY CENTER SAN JOSE MERCURY NEWS

Simson L. Garfinkel's letter to Jean-Louis Gassée

• Jean-Louis Gassée's letter

Published: Nov. 4, 1996

Dear Jean-Louis:

When I told a co-worker that I had received one of your beautiful blue BeBoxes to review, he told me something that should have you really worried: "I've heard that developers really love those machines because they are so easy to program. But as a side-effect, the computer is very difficult to use."

Of course, this comment isn't true. Despite the fact that the easy-to-use Macintosh is extremely difficult to program, it doesn't follow that the two are mutually exclusive.

Indeed, it's much easier to take a machine that is easy to program and make it easy to use: After all, good ergonomics are merely a question of superb design followed by excellent execution.

That's why I'm hopeful that your BeBox could be a major force in the computer industry in the next three to five years. But in order to get there, you're going to have to avoid the mistakes of another computer company that seemed to be creating the next-generation Macintosh: Steve Job's Next Computer.

Creating a new computing platform is a hard job. That's because computers need software in order to work, and there is no way that the company that builds the hardware can also create all of the software that a computer's prospective users will need. When the Macintosh shipped in 1984, pundits damned it because it couldn't run DOS applications. DOS had already been in the business world for three years and had quite a head start. Apple has never caught up.

Indeed, establishing a new computing platform is a kind of race: It's a race to see if you can get applications and users faster than the dominant computing platform -- Microsoft Windows -- can incorporate enough of your good features to eliminate the need for people to switch. It's a race to see if you can expand your new market before it is gobbled up.

Lot going for it

Your BeBox has a lot going for it. It's a fundamentally new kind of computer with an exciting, clean new operating system. But one of the things that I learned after spending five years watching the rise and fall of Next was that first impressions in this computing industry are lasting ones. Be must do better, and you are racing against the clock.

The good news is that you are not repeating the mistakes that Next made with its hardware. Unlike the Nextstation, the BeBox is based on the very best mainstream desktop computing technology. The system's brains are a pair of Motorola PowerPC microprocessors -- the fastest, lowest-price mass-market chips around.

The rest of the BeBox is built completely around PC industry standards: your computer accepts standard PC expansion cards; you use standard PC memory; and you have interfaces that support both PC and Macintosh hard disk. And you've added a lot of special-purpose interfaces for the music industry, like a MIDI interface that can speak directly to synthesizers. You've even put three infrared remote controllers on the back panel, which lets your BeBox control any piece of home stereo equipment that has a remote control. You've designed this box to fit right into a digital music studio, making it the next-generation Amiga as well.

This combination of PowerPC and mainstream PC technology makes the BeBox an extremely powerful computer that can be put together at bargain-basement prices. And I know that Be has plans on the drawing boards for a BeBox with four central processing units -- this would further double the speed of the computer for a few hundred dollars, making it faster than Digital's top-of-the-line Alpha workstations.

Mainstream PC vendors can't double the speed of their computers by adding a second microprocessor, because mainstream PC operating systems like Windows 95 and MacOS weren't designed with multi-processing in mind.

Even Microsoft's vaunted Windows NT operating system, which does support multiple-processing for servers, still doesn't have a multi-threaded, multi-processing graphical user interface.

Adding a second processor to your Windows NT box might make your Web server run twice as fast, but it probably won't double speeds for a user sitting at the keyboard. Because you built a system which is based on multi-processing from the ground up, the BeBox has the potential to always be the very fastest computer on the market.

But remember the race. These days, most professionals don't need to have the very fastest computer on their desk. For many people, a 90 MHz Pentium will do quite nicely, thank you. So do not think that multi-processing alone will guarantee your success.

Besides the hardware, I am extremely impressed with the internals of your Be operating system. Designed from the ground up as a highly-efficient, multi-threaded, memory-protecting operating system, even the Developer Release 8 version that I experimented with seemed quite solid -- certainly much more solid than Apple Macintosh System 7.5.5 or Microsoft Windows 95.

And I'm very impressed with the speed of your demonstration applications -- especially the ones that spin 3-D objects in windows or manipulate large files of digital sound. I can see why people are excited about using the BeBox to create digital media programs.

But as it stands today, your BeBox is like a half-finished building. You have put down an excellent foundation and built some great stud-walls. But nobody would want to live there right now. And I'm worried that if you start showing people around, they will be put-off by the lack of amenities.

My co-worker is right: it is too hard to use the Be.

The BeOS user interface needs some serious re-thinking. Right now, applications put some of their menus at the top of each window, and other menus on the left-hand side of the screen. All of the menus should be put in a single, consistent place. The commands that appear in the menus should be consistent between your demonstration applications. And most importantly, you should build an online help system, so that help works the same way in all of your demonstration applications.

The real problem here is that your demonstration apps were really just thrown together, to prove to people what the BeBox could do. That's a mistake. Your demonstration applications should demonstrate the very best of what the BeOS user interface has to offer. They are as important as your underlying BeOS. Compatibility with existing computers -- and having that compatibility today -- should also be a high priority. Here, you are making the same mistake as Next.

As proof, consider the floppy disk drive. The first Nextcube didn't have one. And yours only works with programs designed specifically for the Be, or specially formatted floppies for the PC that most users will not bother to do.

Jobs too early

Steve Jobs had thought that all of the machine's programs and data would be delivered over the Internet. Although Jobs was on the right track, he was five years too early. Two years later, Next released its first computer with a floppy disk drive. Although the machine worked with IBM PC floppies, Macintosh floppies, and Next floppies, it didn't matter: Next had acquired a reputation of being unable to read standard floppy disks.

The perception that a computer isn't compatible is very difficult to live down. So, from the beginning, the BeBox should accept both PC and Macintosh floppy disks. It should network with Windows-run machines, Macs, and Unix systems. Fortunately, all of the programs to accomplish these tasks are freely available on the Internet today. You should have one of your engineers download them and integrate them into BeOS.

Another thing that you should seriously consider adding is the ability to run programs meant for other types of operating systems. Lately there have been persistent rumors that Be has been having high-level talks with Apple. I don't care if Apple buys Be or if Be buys Apple, but I would like to be able to run Macintosh application programs on my BeBox. We know that this is possible: Sun, after all, sells a piece of software that lets me run Mac applications on my SPARCstation. Because the BeBox is based on PowerPC, it could do a much better job -- especially if you had help from Apple.

I realize that this may be an ideological issue with you. After all, what makes Be different from the Mac is its multi-threaded operating system and multi-threaded applications. Mac applications would never run as fast as native Be apps, and they couldn't take advantage of your innovations.

An incentive

In a way, that's good: there would still be a big incentive for people to develop BeOS applications. No, Macintosh compatibility would simply make it much easier for people to transition to your new machine -- the same way that Microsoft Windows can run DOS applications. And if the compatibility was good enough, you might even get Apple to drop its plans for System 8 (already more than two years late) and adopt BeOS instead.

In the meantime, I am very excited about another route that you've decided to explore: selling a version of the BeOS that runs on off-the-shelf Power Macs. This will give people a chance to try the BeOS for themselves without having to make a \$2,000 hardware investment. I've seen it run recently, and I can report that on the same hardware, BeOS outperforms MacOS by a considerable margin. But please, price BeOS for the Mac low enough so that the next-generation of programmers in high schools and colleges around the country aren't shut out.

Better yet, give it away. Make the test, or beta, versions of BeOS for the Macintosh freely available via the Internet, the same way that Netscape does with its popular Navigator product. Make it easy for people to report bugs, and let people know when the bugs that they reported get fixed.

You're going to need all the help you can get getting this new plane off the ground. And you don't have much time.

Sincerely,

Simson L. Garfinkel

Simson L. Garfinkel is a regular freelance writer for the Mercury News and a former programmer for Next Software Inc.

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MERCURY CENTER · SAN JOSE MERCURY NEWS

Jean-Louis Gassée's letter to Simson Garfinkel

• Simson Garfinkel's letter

Published: Nov. 4, 1996

Dear Simson:

Timing is everything; there is no aspect of human endeavor that doesn't completely depend on, or at least benefit from, good timing. And so it is that the timing of your review of our fledgling operating system, the BeOS, is perfect.

You're seeing our product at a time when we're preparing it for ever-wider exposure and review; a time at which we modestly appreciate praise but ravenously devour constructive criticism and input.

When two grown people write letters to each other in full public gaze, the results usually vary from contentious to downright combative. But, in this case, I find nothing in the spirit, and little in the details, of your review with which to take issue. Your discerning nature has caused you to raise questions that we have also raised, and continue to debate internally. Perhaps I can share some of our thoughts.

When I founded Be in 1990, our goals were modest, and they remain relatively so. It was not, and is not, our company's mission to replace existing operating systems or to become the next major force in computing.

Our goal was to create a successful new computing platform, unencumbered by the baggage of the past; a computing platform that addresses the exciting and fascinating challenge posed by the confluence of computers and high-capacity digital data. Developers and users working in this area have an insatiable need for better methods to receive and send information quickly, higher performance and richer functionality. They work in a network-based world, creating Web pages, developing CD-ROM games, producing training videos, composing music, manipulating photographic images; in short, they are the digital content designers. These people are not getting what they need from current computing platforms; it is our goal to help them.

The BeOS challenges assumptions that are so entrenched in the computer industry's psyche that they have almost assumed the status of physical laws.

Assumption No. 1

The first assumption is that multiprocessor personal computers are not viable or desirable, because of cost constraints and lack of operating systems to take advantage of their extra power. What you so generously call our "beautiful blue BeBox," combined with the BeOS, shows that this assumption may be incorrect.

The second assumption is that operating system architectures designed 10, or even 20, years ago are adequate to today's tasks. The intelligent, gifted designers of the 1970s or 1980s could not conceive of personal computers connected to the Internet, displaying 3-D graphics, acting as videophones, playing music and creating a rich interactive environment for the user. But these capabilities are being bolted onto and crammed into old operating system architectures, with predictable results: they don't work well and are increasingly baroque to program.

We designed the BeOS with that most valuable of gifts: 20/20 hindsight and no existing architecture to retrofit. The result is an operating system designed to meet the challenges of interactive digital media environments. A further result is that the interfaces, or APIs, are self-consistent, small and very clear.

The third assumption, and the most controversial, is that backward compatibility must be maintained at all costs. It is wonderful that a 1996 personal computer can run software created in 1988, but the costs of maintaining this compatibility are decreasing stability of much-modified operating system code, decreasing performance, increasing memory requirements and, worst of all, ever-increasing complexity of application development and use.

Timing is everything

Backward compatibility is valuable but, once again, timing is everything: we are at a time when interoperability over intranets and the Internet, and interchange of documents, pictures, audio and video assume greater importance than the ability to run this or that software application.

Accordingly, we have designed the BeOS to be a good intranet and Internet citizen, and to use existing file and media formats, but not to run legacy applications. The liberating effect is hard to describe fully in words, but the primary consequence is that the BeOS developers are able to devote 100 percent of their effort to achieving performance and functionality goals, not the 10 percent that would be the case if they worried about being able to run a 1988 version of WordStar.

None of this is rocket science; it just took a little courage and a certain amount of faith and technical prowess to embark on this project. Do we worry that existing operating systems will incorporate the same features? No. They are indeed sprouting audio, video and other APIs and features, but please see the second assumption above.

A measure of pride

Although our product is not yet ready for prime time, we take some modest pride in what we've achieved so far: a modern, stable, fast operating system that is very easy to program. It is, however, as you so aptly put it, a half-finished building.

We prefer to think of it as a new home without the owners' furniture and decorations. We've created an operating system that developers love to program and a basic user interface that has not yet been through the rigors of long-term usability testing by a wide range of people. Over the coming months, we will first ship the BeOS to many, many current Mac developers, primarily by bundling it with the January issue of MacTech magazine. This is still a developer release and not intended for the non-developer user.

Early next year, we will release a Preview Edition of the BeOS for PowerMac, intended for developers and adventurous users who want to get a taste for what's to come. The BeOS today is in the hands of slightly more than 1,000 BeBox owners. By the spring of next year, we expect that over 50,000 people will have experienced the BeOS on their PowerMacs.

We will listen carefully to their suggestions and input and incorporate those into our Release 1 product in the early summer of next year.

Your review of our user interface and sample applications, along with reviews from many other early BeOS adopters, is helping us to make the BeOS, already very accessible and friendly to developers, more approachable and intuitive to users. We're working on user interface guidelines and on making some things much more usable.

For example, the BeOS does indeed read PC floppies, but the interface could hardly be described today as friendly. The fact that it requires a sophisticated user like you to figure out how tells us as much about our product as about your capabilities.

Focused on delivery

Compatibility with existing applications has not been a priority for us; we're a small company that's very focused on delivering our new product. But, it would be helpful if existing MacOS applications could run under the BeOS on a PowerMac. It would be disingenuous for me to claim that we're focusing much effort on this now; we're actually seeing more work and focus on this outside Be than inside. We cautiously encourage these efforts. We want to balance the desire to run existing applications with the fear of burdening our new operating system with too much baggage.

We are entering a critical phase for our company and its products. By making the BeOS available for PowerMacs, we eliminate the question: "is it the hardware, or the software, that's running so fast?" We invite and encourage comparison between the BeOS and other operating systems running on the same hardware, and we expect to shine in some areas and disappoint in others. But we are no longer hiding our operating system behind our hardware.

By exposing the BeOS to tens of thousands of early adopters, we expect to be delighted or disappointed by some of the input and surprised by the rest. Our success is dependent on our ability to listen to that input and react quickly to it.

Sincerely,

Jean-Louis Gassée

Jean-Louis Gassée is best remembered as the fiery, flamboyant head of Apple Computer Inc.'s research and development division during the 1980s. Today, Gassée is president and chief executive officer of Be Inc., which has created a computer and operating system from the ground up that is faster and more powerful than existing computers using Macintosh or Windows operating systems. Specifically, Gassée is creating a system that is easier for developers to create new programs. It has attracted huge attention from the technology world, both because of what Gassée is trying to create -- and because it is Gassée.

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