

Theft Deterrence

Encryption

Mobile Data Security

Data Protection

FailSafe™

PC 3.0™



Virtualization

Instant-On

Ease-of-Use

Secure

Always Available

HyperSpace™

Phoenix Technologies Launches FailSafe™: Built-In Security and Remote Management for Laptops

October 2007

Advanced theft-Loss Protection and Prevention, Including Encryption, Tracking, Recovery, and Remote Controlled Security to be Embedded into Next-Generation Mobile PCs.

Through an intuitive, easy-to-use Web interface, Phoenix FailSafe delivers a comprehensive range of theft-loss prevention and protection features..



With FailSafe, Phoenix PC OEM partners can embed an innovative command and control system into the PC core firmware to track, control, and recover lost or stolen mobile PCs.

Users can encrypt, lock and even destroy data on lost laptops to protect sensitive or private information. Information on the laptop can also be encrypted to prevent data theft resulting from stolen laptops.

As a result, consumers, small business owners, and IT managers can remotely manage mobile PCs, much like mobile phones are managed, through an intuitive Web interface.

Leading industry analyst and mobile PC futurist, Tim Bjarin of Creative Strategies said, "By making it easier to track, recover and remotely control portable PCs, Phoenix FailSafe typifies the type of solution needed to provide the peace of mind and protection to advance the mobile PC category including UMPCs (ultra mobile portable computers) and MIDs (mobile internet devices). This degree of security ensures that the personal and private information stored on these powerful but mobile and convenient devices, remains protected, even in the event that the device is lost or stolen."

"According to the FBI, fewer than five percent of stolen laptops are ever recovered, which is why the embedded protection of Phoenix FailSafe is so critical," said Woody Hobbs, President & CEO of Phoenix Technologies.

"With more than 25 years of BIOS and core firmware experience, the Phoenix engineering team is uniquely qualified to integrate this degree of remote management and security functionality at the firmware level on the PC. Backed by the Phoenix global support infrastructure, FailSafe allows PC OEMs to offer a premium service for their consumers and small business customers, solving a critical business problem, while gaining a recurring revenue stream that will last long after the original sale of the mobile PC."

For full article, please visit:
<http://investor.phoenix.com/releasedetail.cfm?ReleaseID=269012>

Phoenix Technologies Launches HyperSpace™ Foundation for PC 3.0™ With Embedded Simplicity™

November 2007

“Intel Core 2 Duo processors and Intel Pro processor technology enable the development of more secure and better performing virtualization infrastructure,” said Gregory Bryant, Vice President and General Manager for Intel’s Digital Office Platform Division. “Intel is pleased to see Phoenix embracing Intel’s technologies to deliver innovative products for PC clients.”

Leslie Fiering, Research VP at Gartner, said, “Client computing combines two worlds -- on one side, users want their work and personal lives to be empowered by an instant-on and always available PC with ubiquitous network access and easy-to-use applications. On the business side, beleaguered IT organizations are working with shrinking budgets and face growing concerns over security. The industry will welcome a solution that holds the promise of satisfying both PC user needs as well as IT remote management and security needs.”

“AMD believes the PC is the next frontier for virtualization technology, and Phoenix is an exciting and early innovator. HyperSpace and the Phoenix concept of Embedded Simplicity™ promise a revolutionary computing experience that delivers the ease-of-use consumers and business professionals demand,” said Emile Ianni, Corporate Vice President, Platform Solutions Engineering, AMD. “By taking full advantage of AMD’s advanced graphics and virtualization performance innovations, HyperSpace promises to deliver an optimal virtualized computing experience that delivers the true performance, security and graphics potential that is possible from AMD technology. AMD’s leadership in virtualization in PC processors, chipsets, and graphics processors, combined with Phoenix’s leadership in platform-level software solutions, provide a formidable ecosystem that is enabling new and exciting ways to evolve virtualization technology from the datacenter and into the PC.”



For full article, please visit:
<http://investor.phoenix.com/releasedetail.cfm?ReleaseID=273099>

PC
3.0

Making Laptops Work Better

Don Clark
November 2007

One of the pioneers in personal-computer plumbing is launching an ambitious campaign to improve laptop functions, including the ability to fire up software in seconds.

Phoenix Technologies Ltd., which has long supplied built-in software that controls how PCs boot up, hopes to persuade hardware makers to build in additional programs to address problems that bedevil mobile users. Among other things, Phoenix executives say the new technology can reduce laptop power consumption and make portables more impervious to hacker attacks.

The additional programs would not use Microsoft Corp. is Windows and could be accessed before the operating system boots up. A Web browser program, for example, could be called up quickly and be used to find a map or check times for a movie. Other software could play DVDs without using Windows, reducing power consumption.

The plan builds on virtualization, an increasingly popular technology that adds a layer of software between computer hardware and operating systems. Users of server systems exploit the technology to simultaneously run multiple operating systems and more fully exploit the capacity of their hardware.

Virtualization software also can help wall off sensitive parts of computers, to make it harder for intruders or malicious virus programs to take control of a system. Intel Corp. and Advanced Micro Devices Inc. have been adding features to support virtualization in new microprocessors, partly for that reason.

Phoenix, of Milpitas, Calif., hopes to improve security in similar ways with the effort it calls HyperSpace. But it is hoping to address other problems, too, including the long delays laptop users face in booting up Windows.



The company has developed virtualization software that exploits features in the Intel and AMD microprocessors and would be embedded in other chips that PC makers install. Those computer makers would be asked to build in a small number of application programs, which also can be stored on chips.

Steve Grobman, director of Intel's business client architecture group, noted there are other instant-on approaches being offered by laptop makers. But Phoenix is taking that technology to the next level, he said.

There are many hurdles. Besides courting PC makers, Phoenix must persuade software makers to create products to its specifications.

The company, though it has close ties with PC makers as a provider of what is called basic input-output software, could run up against similar efforts by larger companies, including Microsoft and VMware Inc., the virtualization specialist that is majority owned by EMC Corp. A standard in virtualization software "is going to become a major control point in PCs, so people are going to want to own it," said Leslie Firing, a research vice president at Gartner Inc., a market-research firm.

Phoenix executives concede it will take some time to win over hardware and software makers. But they expect computers that use HyperSpace to begin appearing in 2008.

"We don't need thousands of partners" said Woody Hobbs, Phoenix's president and chief executive officer. "We need a few good partners."

Press F4 to Bypass Windows With Fast-Boot Technology

November 2007
Bryan Gardiner

There's absolutely no reason you should be waiting the three-plus minutes it takes your computer to boot up Windows, says Woody Hobbs, CEO of Phoenix Technologies. And indeed, if Hobbs has his way, you may not have to endure those waits much longer.

Phoenix says its new technology, HyperSpace, will offer mobile PC users the ability to instantly fire up their most used apps -- things like e-mail, web browsers and various media players -- without using Windows, simply by pressing the F4 button.



As Windows gets more and more complex, we've seen startup times get longer and longer," says Hobbs. "If I go to the airport and try to connect to a Wi-Fi network, I'm waiting for five minutes just to connect. That's ridiculous -- people usually just give up and use their cell phones or PDAs."

"We're really excited about what Phoenix is doing," says Steve Grobman, director of Intel's Business Client Architecture Group. "It really shows how companies are starting to use the underlying virtualization building blocks we put in our silicon in some really new and smart ways."



PCs Could Run Multiple Operating Systems

*Peter Svesson
November 2007*

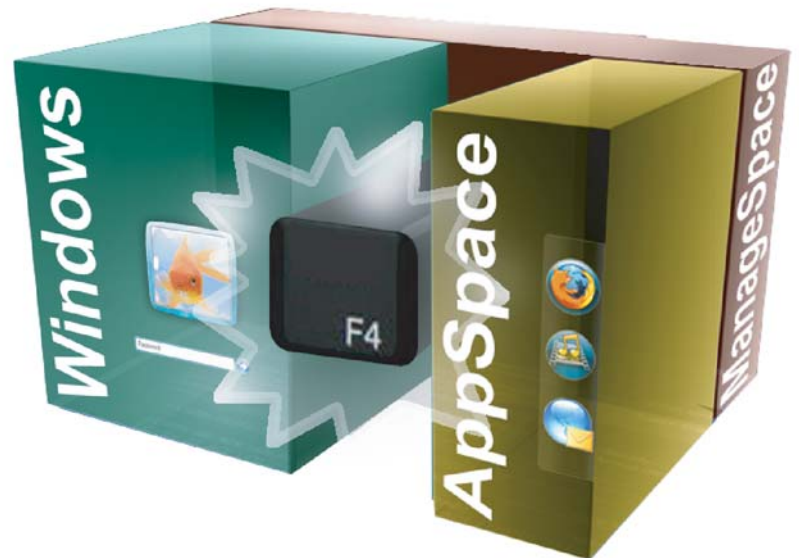
Tired of Windows? The next generation of laptops may let you jump from one operating system to another to play movies, surf the Web or read e-mail.

Phoenix Technologies Ltd., a leading maker of software that controls Windows computers most basic workings, announced this week that it will offer a feature it calls HyperSpace to laptop manufacturers.

Laptops with a media player separate from Windows already exist, but the players don't run parallel to Windows (you have to boot into the player, then shut it down and boot into Windows to switch tasks).

Laptops with HyperSpace would likely have a separate button that instantly switches away from Windows.

In a second phase, Hobbs sees things like Web browsers, e-mail programs and Web conferencing software like Skype being built into HyperSpace. Computer management functions like antivirus scanning could also be performed outside Windows, improving security, Hobbs said.



The technology would move PCs closer to being appliances - always on and available - and give computer manufacturers a chance to differentiate themselves in what is in many respects a commodity business, by pre-loading different applications.

The HyperSpace environment would be based on Linux, giving the freely distributed operating system what could be its biggest break yet in the struggle to gain traction against Windows on PCs.

Laptops of the Future

John Edwards
November 2007

Phoenix Technologies, best known for supplying BIOS software to PC vendors, wants to take the LoJack approach to the next level. Its new FailSafe notebook management system, which notebook makers can embed into the PC's core firmware, helps track, control and recover lost or stolen notebooks. Users can encrypt, lock and even destroy data on lost laptops to protect sensitive or private information.

"The idea is not only that you can locate, very quickly, a stolen notebook, but wipe its hard drive clean," Enderle says. "By putting the code in BIOS, that makes it even more difficult to remove, or even know it's there." Look for FailSafe in notebooks starting in mid-2008, Phoenix says.



HyperSpace- few applications & fast

Windows - many applications



Perhaps even more intriguing, Phoenix is pushing embedded virtualization technology for laptops that it calls HyperSpace: This technology would let notebook users boot up in seconds and use applications such as e-mail, a media player and a Web browser without firing up Windows. (If you've ever used an Apple MacBook that powers up in seconds, you know how appealing this sounds, compared to waiting for Windows to load.) Phoenix hopes the first laptops to with HyperSpace embedded in them will appear in 2008.

PC
3.0

ReInventing the PC:

Phoenix Technologies hopes to pave the way for what it calls PC 3.0 with its new HyperSpace platform.

*Tim Bjarin
November 2007*

Every year at about this time, I have the privilege of being invited to speak at the Phoenix Technologies customer conference.

You may not know Phoenix Technologies by name, but you're probably familiar with its software. This Silicon Valley-based company, while not as well known as the Intels or Apples of the world, provided software that was fundamental to the birth of the PC revolution.

The new CEO, Woody Hobbs, challenged company engineers to add new levels of innovation to its core BIOS software. The result is something Phoenix introduced to its customers this week - an enhancement the company calls PC 3.0 HyperSpace "Embedded Simplicity." According to Phoenix officials, they believe that PC 1.0 was DOS and PC 2.0 was Windows. They believe the HyperSpace platform, which is a combination of firmware, BIOS software, and applications that deliver



a form of client virtualization for use on next-generation PCs, is about to forever change how people work with PCs, according to Phoenix officials, they believe that PC 1.0

This is a pretty bold vision and statement. After seeing multiple demos of the new value-added BIOS software and understanding a bit more about how it works and what its goals are, I think that Phoenix may be on the right track to change the way people actually use a PC.

Vista Virtualization Move Opens Real Doors

Ina Fried
January 2008



Microsoft's decision to allow Home versions of Vista to run inside virtual machines may have far-reaching benefits in the coming years.

Phoenix has been working on HyperSpace, a technology that allows for a range of software from embedded Web browsers, to media players, to security programs, to run outside the main operating system.



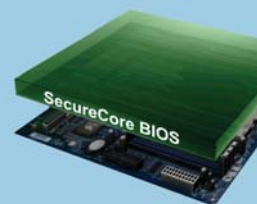
Woody Hobbs, CEO
Phoenix Technologies

"The company has been working to bring HyperSpace to market this year, but because the technology relies on virtualizing some components of the PC," Hobbs said, "it was hampered by Microsoft's licensing rules, which limited Vista virtualization to the two priciest versions of the operating system."

"Microsoft's change on the licensing front," Hobbs said, "opens the door for significant changes to the PC landscape, such as having security software that can run before and after Windows runs, as well as a machine that can boot instantly for simple tasks such as DVD playback, while simultaneously running Windows."

Virtualization allows a computer to run a single version of an operating system, but seem to be running multiple copies. Some machines have a "fast boot" Linux option today, but the machine has to restart to boot into Windows, meaning that users can't easily switch back to the DVD and keep their place in the movie.

Phoenix announced the HyperSpace technology in November, but expects it will take until at least the back-to-school season before the first machines hit U.S. shelves, and probably the holidays before machines start to make sophisticated use of the non-Windows space for things such a Web browsing or e-mail.



The BIOS loads as normal. In its founding, Phoenix has its BIOS software (which acts as an interface between Windows and the computing hardware) on more than 1 billion compute

BIOS Unleashed: Phoenix HyperSpace Shakes Things Up

Instant-On Computing Outside Windows

March 2008

By Kyle Shuman

Hyperspace might be a fictional staple of science fiction and videogames, but it's one that carries a lot of weight for fans of the genre. Hyperspace is associated with one of the most popular sci-fi movies of all time, "Star Wars," and with one of the most popular early video games, Asteroids.

The latest version of HyperSpace, from Phoenix Technologies, actually has nothing to do with space travel (real or fictional), but it eventually might prove almost as popular with computer users as those early sci-fi movies and games.

HyperSpace is a technology that will provide instant-on capabilities to personal computers. Essentially, after you press the computer's Power button to boot the computer, you'll be able to press a hotkey and enter the HyperSpace environment, where you instantly can perform some basic tasks, such as accessing your appointment calendar or using the Internet. Windows continues to boot in the background while you work.

With HyperSpace, there's no more waiting a few minutes for the boot process.

Developing HyperSpace

You can think of HyperSpace as a layer of software that sits between the BIOS and Windows; it's an operating environment, rather than a full-fledged operating system. Because HyperSpace loads quickly on your PC, it provides the type of instant-on access to some features of your computer that you don't have with Windows alone. HyperSpace can run scaled-down versions of a few open-source software packages, giving users immediate access to certain key capabilities.

"HyperSpace is a set of mechanisms that allows us to create an environment that runs side-by-side with Windows," says Dr. Gaurav Banga, CTO and senior vice president of engineering at Phoenix. "It's very predictable. It's designed to be small and not vary at all. Independent of what Windows is doing at that time, your access times (with HyperSpace) will be small and very predictable."

Unlike other applications that traditionally have run outside Windows (think "DOS prompt"), HyperSpace will make use of a graphical environment, rather than a text-based interface. Users should have no problems adjusting to the easy-to-use HyperSpace GUI.

Fixing Laptops

Phoenix says HyperSpace will fit well in the current computing marketplace because the market share of laptop computers continues to grow. Phoenix research shows that more than half of all business computers purchased will be laptops by 2009. At the same time, many companies make laptops, and the strong competition drives prices down. Laptop makers are looking for reasons to set their units apart in the market, and HyperSpace can give manufacturers some unique features.

"There's nothing in HyperSpace that precludes it from working on desktop" computers, Banga says. "There's just a greater

CPU
COMPUTER POWER USER

need on the notebook side."

Phoenix says although laptops are popular, they pose some annoying problems for users; problems that the company expects HyperSpace can fix, such as the following:

Long boot process. Depending on your computer's configuration and hardware setup, you can spend two to four minutes waiting for Windows to boot in a full power-up situation and 30 to 60 seconds waiting for Windows to recover from sleep mode. It doesn't sound like much time, but the Windows boot process can seem frustratingly long in certain situations.

Battery life. Laptop batteries never quite seem to live up to the longevity claims the manufacturer makes. Any power conservation feature is helpful for users.

Security. With the complexity of Windows, security problems can occur in a variety of areas. Banga says Windows' security struggles in part because of its massive size.

"No matter how good your design is, Windows suffers from being very, very large," he says. "No single person or group of people can describe all aspects of Windows. Our environment is designed to be small, not a monolithic system that requires millions of lines of code."

Finding solutions. When users have problems, they can be difficult to diagnose and fix, especially if Windows isn't working properly.

HyperSpace Jumps In

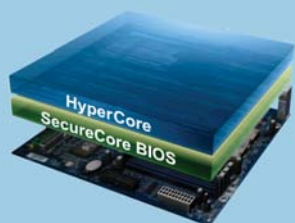
HyperSpace can help with all four of these problems.

Instant on. HyperSpace is available for use just after you press the power button. It can run in the foreground while Windows loads in the background. With HyperSpace, you'll have access to certain open-source software packages that the computer's OEM chooses to include. For example, you might be able to immediately connect to the Internet through a Wi-Fi hotspot at the airport using HyperSpace.

With the AppSpace loaded, users can begin running HyperSpace software packages. AppSpace is the area of HyperSpace containing the HyperSpace appliances. Even though Windows hasn't fully loaded at this point, users can make use of the HyperSpace appliances to perform simple tasks such as using the Internet, playing a ND, or checking email.

ugh HyperSpace

2



Since placed serves windows) into ers.

HyperCore loads, needing only a fraction of a second. HyperCore provides the base for the HyperSpace appliances to work with the BIOS.

3



With HyperCore in place, the HyperSpace components and Windows can begin loading. The ManageSpace loads first, and it allows troubleshooting capabilities. Through ManageSpace, an end user can allow a third party to take control of the user's computer and troubleshoot problems. Using ManageSpace, a third party could even adjust or update the BIOS if necessary. The user controls how and when the third party can control the machine.

4



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"Within a few seconds, while Windows is still booting, you'll have a screen to use," Banga says. "It's one to two seconds from the time you hit the power button. From standby, it's about one second. It's truly instant-on."

5



After a few minutes, Windows is fully loaded, and users can toggle between the AppSpace in HyperSpace and Windows. "The Windows boot takes roughly the same amount of time" as it does in a computer without HyperSpace, Banga says.

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Once Windows finishes loading, you can toggle between HyperSpace and Windows, using Windows as you normally would.

Instant-on capability is something consumers have become accustomed to with other tech devices, such as mobile phones and MP3 players, magnifying the frustration over a slow-loading Windows OS. Using the example cited earlier, computer users currently might have to wait three to five minutes for Windows to load and connect to the Wi-Fi hotspot when sitting in an airport with their laptops, which is not a great option when you need to check some information a few minutes before the final boarding call for your airplane. Faced with this situation, users might decide to forego the computer and use an instant-on Internet-enabled mobile phone or other mobile device (despite the limitations of those devices) to achieve faster performance. HyperSpace would give users the option of using the computer to check the Internet when time is a significant concern.

Conserving battery life. When using HyperSpace, you can

leave Windows in suspended mode, which will conserve the battery. And you can toggle between Windows and HyperSpace, only using Windows (and extra battery power) when needed. Battery conservation has been especially tricky with Windows Vista.

The continued increase in market share for laptop computers versus desktops brings more attention to battery conservation problems and has sparked Phoenix's desire to release HyperSpace now.

"HyperSpace has a small footprint with limited appliances," Banga says. "We're not using as much battery power."

Providing security. Because HyperSpace works outside Windows, it isn't susceptible to the same security holes and virus attacks aimed at Windows. Eventually, antivirus software (which tends to make Windows run slowly) could run exclusively in HyperSpace.

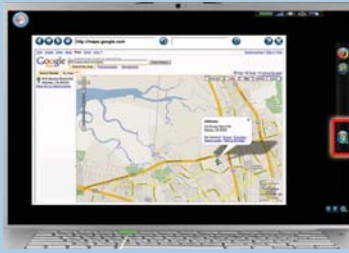
"Windows gets larger and more powerful," Banga says. "However, that has come at a cost—a lack of security and unpredictability.... What we're trying to do is not take any of the power of Windows away; we're trying to augment the power."

Remote management. Using HyperSpace, end users can allow a service provider to easily control the computer remotely to fix problems, even if Windows isn't working. HyperSpace gives the end user the ability to completely track the work of the service provider, ensuring no problems.

Appliances vs. Applications

Although you'll run an application in Windows, Phoenix calls its applications in HyperSpace appliances. The name isn't the

Using HyperSpace



HyperSpace, you can select among a few appliances, such as the Web browser displayed here. Each available appliance appears as a button along the right side of the HyperSpace windows.



As you are using HyperSpace, Windows loads in the background (above). You can toggle out of HyperSpace to check on the status of the Windows load by either clicking the Windows button along the right side of the HyperSpace window or by using a toggle key on the keyboard. Once Windows is loaded (above right), you can use either HyperSpace or Windows.

only difference, though.

Exclusivity. Appliances in HyperSpace only are shipped within firmware or on a protected disc. You can install Windows applications at any time, often through an Internet download. Obviously, the HyperSpace appliances are more secure.

The potential downside is users will not be able to easily change the appliances included with HyperSpace. Uninstalling software in HyperSpace will be extremely difficult, meaning you'll want to carefully make your initial choice of appliances in HyperSpace.

Size. The design of HyperSpace ensures its appliances must be small, allowing them to load and work immediately. Windows applications can require hundreds of megabytes of memory, and they can require several seconds or more to load.

Updates. HyperSpace appliances rarely will require updates,

but when they do, Phoenix will only allow updates from secure Internet sites. In contrast, Windows applications sometimes require daily updates, which are especially important to avoid problems with viruses or security breaches.

Putting HyperSpace to Work

One of the first ways HyperSpace may appear in the marketplace is among business users. For example, companies may want a HyperSpace appliance that is customized for sales people with contact lists, email access, and appointment calendars, giving them instant access to the computer tools they need to perform their jobs more efficiently.

Ultimately, though, the implementation of HyperSpace rests with OEMs. As with its BIOS, Phoenix will be providing the HyperSpace technology to OEMs, and those OEMs will decide how to make use of HyperSpace and which appliances to include.

"OEMs will decide what it looks like," Banga says. "You could imagine a lot of people spending 85 to 90% of their time on Web-based applications: email, IM, calendars, etc.

Those people don't need desktop access. . . . We believe this is the missing link for making a Web machine."

Phoenix is in negotiation with 20 to 30 OEMs to begin including HyperSpace in their products, and HyperSpace-enabled laptops could be available for purchase after mid-2008. HyperSpace will be in the suite of products Phoenix makes available to OEMs, Banga says. Some OEMs may eventually choose to include HyperSpace on their motherboards, just as they do with the BIOS.

"We believe we are a company best suited to do this," Banga says. "We've been working below Windows for many years. It was an obvious thing for us to do."

Other Instant-On Options

The idea of instant-on computing isn't exactly new.

cME. Phoenix discussed an idea similar to HyperSpace almost five years ago, called cME (Core Management Environment). The cME software allowed for an instant-on computing experience, and it was designed specifically to allow Internet access and remote access for repairs. However, HyperSpace offers more features and a better graphical environment than did cME.

Splashtop. DeviceVM has developed Splashtop, an operating environment similar to HyperSpace. Splashtop boots from the BIOS and allows you to run scaled-down applications, such as a Splashtop Web browser. Splashtop must be built into the motherboard. Unlike HyperSpace, Splashtop runs completely separately from the operating system. While running Splashtop, Windows cannot be loading in the background. You cannot toggle between Splashtop and Windows as you can with HyperSpace. Splashtop is only available on an Asus P5E3 Deluxe/WiFi AP motherboard (which is shown here).

Vista SideShow. With Windows Vista, Microsoft has included the capability for SideShow, which allows you to check information on a secondary screen, even when the PC is turned off or is in sleep mode. You can access the information through "mini programs" that Microsoft calls gadgets, allowing you to quickly check a Web site or email, for example. A SideShow-enabled laptop likely would have a second, small screen built into the lid's exterior case, allowing access to the secondary screen even when the laptop is closed. However, such devices aren't appearing frequently yet.



Phoenix Technologies Wants To Take Your Computer Into HyperSpace

Jennifer Johnson
February 2008



Woody Hobbs, Phoenix Technologies president and CEO

The computing experience hasn't changed significantly for several years now. It's the same routine: You turn your PC on, wait a few minutes for the OS to kick in, and then begin your day. Smartphones enhanced this process by enabling us to access applications instantly with no boot time. Soon, we will be able to enjoy similar instant-on capabilities on our PCs. HyperSpace is a new firmware foundation from Phoenix Technologies that could change the way we use our computers. HyperSpace focuses on instant access applications, simplicity, and security built into the core of a computer. Best known for its BIOS (Basic Input/Output System) technologies, Phoenix is enabling a new domain of functionality with HyperSpace. Woody Hobbs, Phoenix Technologies president and CEO, tells us more about HyperSpace and what it will bring to the PC.

Q: What is HyperSpace?

A: When we think of HyperSpace, the analogy we use is a three-mode PC. Everybody is familiar with how Windows works; we think of it as the power engine of the PC. We want to add two more parts, one of which will be readily apparent to the user. We think a majority of people's daily lives should be handled in a very simple, predictable, and fast way. With HyperSpace, we can offer a very simple-to-use interface for things like email and word processing, or for using the Web, much like if a user's PDA were present in her PC. That's the second face. The third face is almost as important to the overall experience. There's a lot of work that needs to be done in today's PC for maintenance. When you're upgrading or if you run into network issues, you'd like a technician to be able to access your PC. This third face of the PC is a maintenance layer where technicians can work on your machine, where virus checking could run, and where security could take place. That's the three faces: Windows; HyperSpace applications, which we call AppSpace; and the third space called ManageSpace.

Q: What will HyperSpace enable users to do?

A: Well, in theory, they can do anything. It could be anything from games to office applications,

though we really think there are three or four top applications. The first one is a DVD player. Our first versions of this are most likely to hit laptops. Almost all of us enjoy using our DVD player while traveling. But we like to have Windows available whenever we want. For example, we might be watching a DVD and then need to respond to an email. To have to boot the machine to be able to use Windows to send an email is kind of annoying. When I first saw this demonstrated, I liked the DVD application, but I didn't like the fact that you have to boot back and forth. I suggested building something where users can press a single key to pause the movie and then go into Windows. When they're finished, they can hit the same button and go back to the movie. The movie will automatically resume playing right from where it was. The next prevalent application we use is the Web browser. HyperSpace has a Firefox-based Web browser. Browsing is a big part of people's lives. If you move on down, you get to email. Of course, through the browser, you could access email, but when you are on a plane, you may not have connectivity, so you may want offline functionality. Moving down one more notch, you find your basic word-processing applications.

Q: Are HyperSpace applications slimmed-down versions of applications that we currently use?

A: Yes and no. There is not a restriction; it's the practical side. There's no point in reproducing

Windows. It's there, and it does its thing. We think things in HyperSpace need to be slimmed down. They need to require low battery use and be easy to use. Power becomes a second factor behind ease of use, predictability, and low power usage to take precedence over the actual power of Windows. The idea is to keep applications very light and very specialized.

Q: How does HyperSpace work?

A: HyperSpace starts with a product we call HyperCore, which is an extension of our BIOS. HyperCore creates virtual machines; we make the software think that there is more than one machine, when in fact, there is only one.

Q: Does HyperSpace use an operating system?

A: Yes. As an extension of the BIOS, HyperCore runs underneath the operating system on the machines. In order for HyperSpace to run an application or run ManageSpace, you're going to need some form of an operating system. We want to keep this simple and lightweight, so we have a slimmed-down version of Linux that we use. If our customers want, they can use other offerings, as well.

Q: Is the choice of an OS and applications left up to PC manufacturers?

A: Yes. This is not an aftermarket product. This is a product that will be embedded in your PC. You'll have to take it the way the manufacturer offers it. Over time, we may offer ways for users to get additional applications into the machine, but our concern is that adding applications can result in some of the same problems that Microsoft has experienced with malware getting into the machines. We think it's more productive to let Microsoft solve that problem and to keep HyperSpace very powerful. By using Windows and moving some of the more routine functions, we can keep those applications bulletproof. If you let them get updated or installed in the field, you have problems.

Q: What other manufacturers are working on HyperSpace?

A: Virtually all of the PC manufacturers are interested in incorporating HyperSpace in their machines. Some of the manufacturers have had similar experimental efforts over several years. We expect HyperSpace to be available on the majority of machines out there in 2009.

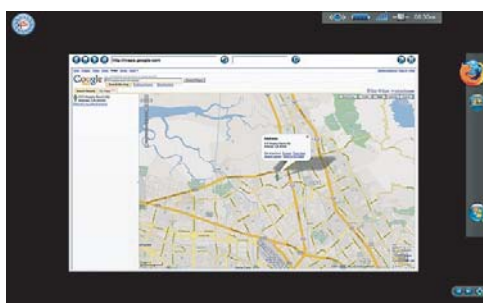
Q: Will users pay more to buy a system that includes HyperSpace?

A: We're going to charge the OEMs for this product, so they're going to increase the cost to the user, but it is a very small cost, and much less than trying to add comparable features with hardware. We wouldn't expect a significant additional expense to the consumer, but there will be some.

Q: What challenges does Phoenix Technologies face in getting HyperSpace to succeed?

A: We have to attract independent software vendors to build their applications on our platform. We don't need hundreds or thousands of applications, if we get five or 10 really solid applications, we will have a very good start. Then, OEMs will have to figure out how they want to differentiate themselves. That will, to some extent, regulate the implementation of HyperSpace as these OEMs figure things out.

In addition, it's well-known that Microsoft defends its territory aggressively. We're going to take some of the user's attention away from Windows. We believe that Windows will actually benefit from this in the long run. Instead of dumping every single solution to every problem on Windows, we allow things to be built outside of the Windows infrastructure. Therefore, Windows can stop holding on to the burden of the entire machine. My goal is to get 80% of your life over into HyperSpace, where it is really easy. That is not a good thing in the short run for the way Microsoft thinks. We're going to have to work with Microsoft to get it to see the benefit of this.



Google maps running in HyperSpace

COMPUTERWORLD

Get Control Over PCs

Mark Hall

September 2007

By mid-2008, PC makers should be offering IT shops extra security for their laptops with FailSafe, BIOS- level software from Phoenix Technologies Ltd. in Milpitas, Calif. According to Gaurav Banga, Phoenixis chief technology officer, IT shops with PCs from resellers that use Phoenixis service will be able to remotely control the content and functions of their mobile devices from a Web console.



Anytime one of their PCs is connected to the Internet, they will be able to retrieve, encrypt and erase files, or even disable the device.



They could also use IP tracing, Wi-Fi location data and other forensic techniques to zero in on a missing laptops location or, if it is equipped with a GPS chip, pinpoint it precisely. If the PC has a webcam, they could even take a photo of the user to see who is running it.

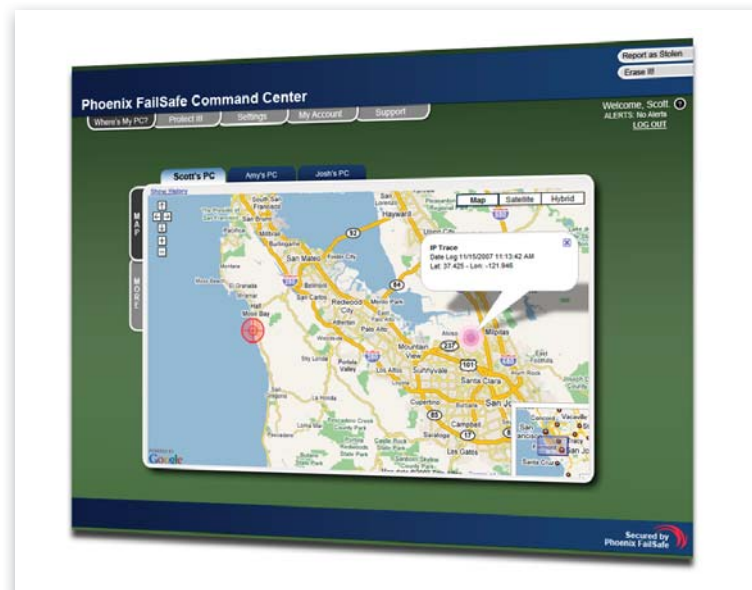
Add-on security tools offer similar features, but Banga contends that FailSafe earns its name because it can be loaded in firmware with the BIOS. That means it cannot be bypassed by booting the PC from a different operating system on a CD. Pricing will be determined by the resellers.

PC
3.0

Phoenix Plays Bloodhound with New FailSafe Product

Sean Ginevan
October 2007

Phoenix Technologies, a company better known for BIOS manufacturing, has decided to jump into the device management market. The company announced Phoenix FailSafe, which they have termed as a “command and control” system for laptop PCs. While their main focus has been on theft prevention, there are numerous hooks into the system that allow for features that are more like out of band management than they are simple asset recovery.



When we briefed with Phoenix we were impressed by the possibilities that could exist in future revisions. For instance, the company says that they have the ability to periodically “wake” a laptop today and transmit recorded data either over an unsecured AP or Ethernet connection if available. However if the system is integrated with a 3G or WiMAX radio, Phoenix would have a more pervasive connectivity medium plus another source for location information. The company has stated that 3G integration is on its roadmap. Finally, because Phoenix’s FailSafe is integrated into the BIOS, the company has the ability to turn FailSafe into a remote management system in addition to leveraging its asset tracking capabilities. How this will develop in future releases will be interesting to watch. Phoenix is currently working with several OEMs to release FailSafe to the public and integrate it into forthcoming laptops. OEMs will resell FailSafe as a branded subscription service.

A New 'Hyper' Twist in Remote PC

David Needle

February 2008

Desktop and mobile PCs are slated to be outfitted later this year with a new kind of remote PC support that's always available.

Built on Phoenix Technologies' HyperSpace platform, the PC management solution is designed to let IT and tech support personnel address problems even while the PC is operating and users are running productivity apps.

"You can access, tune and maintain the machine remotely while it's being used," Phoenix CEO Woody Hobbs told InternetNews.com. "This is like full remote management as if the tech is looking over your shoulder."

Phoenix, a longtime provider of firmware for PC makers, is teaming up with SupportSoft to provide the remote support solution which will be delivered as a Software as a Service.



Roger Kay, analyst with Endpoint Technologies, has seen demos of HyperSpace and thinks Phoenix is on to something.

"My experience with Vista has been that the security is cumbersome," Kay told InternetNews.com. "Phoenix has taken a fresh look at things and brought in a SaaS approach and new technology that I think could make support a lot easier."



Analyst Highlights



What Analysts Are Saying

Gartner

A New 'Hyper' Twist in Remote PC Management

February 13, 2008
Brian Gammage

"Developments like HyperSpace are the beginning of a new wave of software appliances. By adopting an appliance approach, individual functions, such as firewalls, asset management, TV recorders or media players, will be delivered as separate modules that run alongside, rather than on top of, the standard PC OS," said Gammage in a statement. "Software appliances will become a major PC development platform, rivaling OS integration as a major focus of PC industry R&D efforts for targeted security and management functions."

Current Analysis

Phoenix Intros Instant-On Laptop Tech

November 5, 2007
Samir Bhavnani

"Various companies over the years have released instant-on programs. What Phoenix is doing, is taking more of the things that are commonly used and bypassing the core OS. Because this virtualized, stripped-down OS bypasses Windows, it could offer a "huge increase in battery life."



Instant Gratification: BIOS-level Virtualization

November 13, 2007
Pete Lindstrom

"There's a battle going on for the pole position on the physical system. The idea here is you want to be first and at lowest level for some level of control. On the client, you can make things more secure through virtualization, and since Phoenix can launch its hypervisor before everything else, it appears to have that pole position."



Reinventing the PC

November 11, 2007
Tim Bjarin

"By making it easier to track, recover and remotely control portable PCs, Phoenix FailSafe typifies the type of solution needed to provide the peace of mind and protection to advance the mobile PC category including UMPCs (ultra mobile portable computers) and MIDs (mobile internet devices). This degree of security ensures that the personal and private information stored on these powerful but mobile and convenient devices, remains protected, even in the event that the device is lost or stolen."

What Analysts Are Saying



2008: Significant Improvements in PC Security

November 5, 2007
Rob Enderle

“From Phoenix Technologies are two connected offerings called HyperSpace and HyperCore that create a thin virtual machine which sits on top of BIOS and allows an embedded version of Linux to run next to Windows (or the system’s primary OS). In that secondary OS would be a browser, your anti-malware products, some utilities like a media player that would benefit from a more efficient (in terms of power use) embedded platform, and some basic communications tools (light e-mail, browser, and IM client). From a security perspective, by allowing the anti-malware software to run outside the OS, hostile applications like root kits can be more quickly identified and eliminated and, should the primary OS become compromised, the embedded platform can be used to contact support to restore it. Since the embedded platform runs a browser, the user can go on-line and get help even if the OS won’t boot and technical support can take control of the system and restore it without having to ship the machine back or send a tech (assuming the problem is a software problem). This should not only result in a more robust laptop or desktop PC, but also provide secondary benefits to longer battery life, faster boot to basic applications, and fewer conflicts with security software. Performance impact is reported to be minimal.”

What’s Next For Notebooks

December 15, 2007
Rob Enderle

“The idea is not only that you can locate, very quickly, a stolen notebook, but wipe it clean. And putting the code in BIOS makes it even more difficult to remove.”

Rethinking Desktop Security

November 21, 2007
Rob Enderle

“Phoenix Technologies is actually one of the most powerful companies in the PC space we never talk about.”

“Now, Phoenix has figured out how to stop fighting Intel and address both its future and a better user experience on PCs.”

“This could make every PC a Linux PC, even if it runs Windows as well and set up a level of cooperation on the desktop between the platforms we hadn’t even thought of. We won’t likely see hardware based on either initiative until mid-2008, but man, is this ever interesting.”

Analysis: The future of laptops revealed

November 24, 2007
Rob Enderle

“Perhaps even more intriguing, Phoenix is pushing embedded virtualization technology for laptops that it calls HyperSpace: this technology would let notebook users boot up in seconds and use applications such as email, a media player and a web browser without firing up Windows. (If you’ve ever used an Apple MacBook that powers up in seconds, you know how appealing this sounds, compared to waiting for Windows to load.) Phoenix hopes the first laptops to with HyperSpace embedded in them will appear in 2008.”

What Analysts Are Saying



November 28, 2007
John Abbott

Phoenix intent on extending the BIOS into virtual territory through new hypervisor

“Phoenix appears to be emerging from a long few years of difficulties. It has new management in place under CEO Woody Hobbs, noted for his turnaround skills. But the BIOS is in many ways a legacy component of the PC-compatible days. Intel and others have long had plans to update it, potentially eliminating Phoenix’s core business. And virtualization hypervisors, which isolate the OS from the hardware in a manner not so distant from the BIOS, are a threat from a new direction. What Phoenix still has going for it is key distribution relationships with all the major PC OEMs and original design manufacturers (ODMs). If it can maintain these, it’s safe. New products closely embedded into the BIOS are its best chance for expansion and growth.”



Financial Highlights

January 2008

Phoenix Technologies: Declared as 3rd Top Stock of 2007

Forbes
com



Burnham's Beat

Phoenix Technologies Price Change: 186%

January 2008

Living up to its name, PTEC rose from its own ashes in 2007 on the backs of successful restructuring and new management team.

Bloomberg.com

February 2008

After losing money for most of the past two years, software maker Phoenix Technologies (nasdaq: PTEX - news- people) (16, PTEC) has new management that has restored the company. Phoenix boosted revenue by 79% in the most recent quarter and posted a solid profit.

In the early 1980s Phoenix pioneered the design of the basic input-output system (BIOS) that boots up a computer. Phoenix is the leader in the modern version of BIOS with a 50% market share. The company debuted two exciting products late last year. FailSafe, a theft-loss-protection service that remotely disables lost or stolen notebook PCs, and HyperSpace, which eliminates the long

wait when Windows is loading in laptops. Phoenix trades for 25 times my 2008 earnings estimate.

Phoenix Technologies Ltd's revenue this year may beat the software maker's forecast of \$70 million by several million dollars, helped by a record number of new contracts in the fiscal quarter, company officials said.

Financial Highlights



Phoenix Tech Swings to 1Q Profit Of \$2.2M vs Loss of \$8M >PTEC

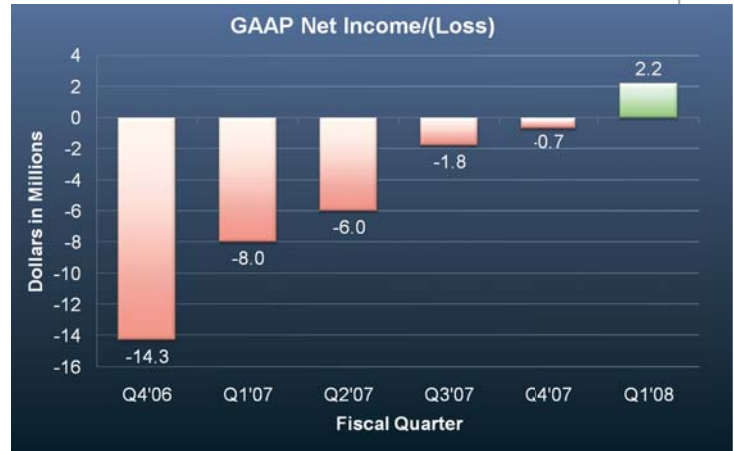
January 2008

Phoenix Technologies Ltd. (PTEC) Tuesday posted first-quarter net income of \$2.2 million, or 8 cents a share, compared with a loss of \$8 million, or 31 cents a share, in the year-earlier period, based on new contracts, increased total backlog and continued operational efficiency.

On a non-GAAP basis, net income was \$3.3 million, or 12 cents a share, compared with a loss of \$4.7 million, or a loss of 18 cents a share, a year ago.

The Milpitas, Calif., utility software company said revenue increased 79% to \$17.4 million in the period ended Dec. 31 from \$9.7 million in the year-ago period.

Analysts polled by Thomson Financial expected, on average, a loss of 2 cents a share and \$17 million of revenue.



Bloomberg.com

February 2008

Revenue was \$17.4 million in the first quarter, a 79 percent increase from a year earlier. Revenue has increased in each of the past three quarters after declining in the previous seven. Woody Hobbs became CEO in September 2006.

Financial Highlights



Bloomberg.com

February 2008

The company, whose core product is Basic Input/Output Systems software to boot up personal computers, signed a record \$50 million in new contracts with corporate customers in the first quarter, Chief Financial Officer Rich Arnold said in an interview. The forecast for the year ending Sept. 30 is about 50 percent higher than last year's sales of \$47.0 million..



Financial Highlights



Bloomberg.com

February 2008

FailSafe offers better security to laptop customers by enabling them to track, disable and erase disk drives remotely. HyperSpace provides faster access to e-mail and instant messaging, among other applications.

Prospective customers' reactions to demonstrations have been "extremely positive," Hobbs said. "Their only questions have been when can they have it, and what tweaks can we make for them."

Bloomberg.com

February 2008

The programs will generate about \$100 million in sales, or about half the company's \$200 million in revenue, by fiscal 2011, Hobbs said. Both products might have modest sales this year and generate "substantial" revenue in 2009, he said.





Phoenix Technologies Corporate Headquarters
915 Murphy Ranch Road
Milpitas, CA 95035 USA
408.570.1000 main
408.570.1001 fax

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About Phoenix

Phoenix Technologies Ltd. (NASDAQ: PTEC) is the global market leader in system firmware that provides the most secure foundation for today's computing environments. The PC industry's top builders and specifiers trust Phoenix to pioneer open standards and deliver innovative solutions that will help them differentiate their systems, reduce time-to-market and increase their revenues. The Company's flagship products, AwardCore, SecureCore, FailSafe and HyperSpace, are revolutionizing the PC user experience by delivering unprecedented security, reliability and ease-of-use. The Company established industry leadership with its original BIOS product in 1983, has 155 technology patents and 139 pending applications, and has shipped in over one billion systems. Phoenix is headquartered in Milpitas, California with offices worldwide.

For more information, visit www.phoenix.com.