

Newsdesk

■ Linux to dominate supercomputing ■ Linux drama! ■ MIDI ■ Allied Irish Bank moves to Linux ■ SETI
■ Apple Rendezvous for Linux ■ Dell Linux desktop PC ■ Skype client ■ Acrobat Reader for Linux CE

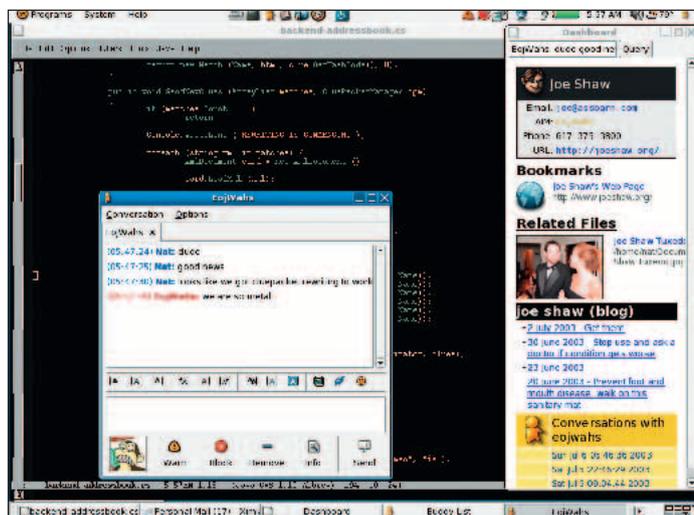
Mono 1.0 is go!

The Open Source implementation of Microsoft's .NET framework released

Ximian has announced the release of the first official version of Mono, the Open Source implementation of Microsoft's .NET framework for use on Linux, Mac OS X, UNIX and Windows. Mono was said to be the primary reason Novell approached Ximian as a take over target last year, and the release is said to be vital to the company's future Linux ambitions.

The Mono project has been led from the beginning by GNOME and Ximian luminary Miguel de Icaza, who said the release of Mono should make it easier for programmers to create quality, cross-platform applications.

"Even as Linux grows on enterprise desktops, developing applications for the Linux desktop has been challenging because existing tools were extremely technical and complex," he said. "Mono is an extremely usable, commercial-



Dashboard attempts to provide information relevant to the task at hand, and was written entirely using Mono and C#.

grade development platform for Linux desktops and servers with a complete set of tools and APIs. It's based on

published standards and proven programming languages and libraries." This, he said, made it the perfect vehicle for developing applications for Microsoft Windows, Apple Mac OS X and other flavours of UNIX.

The package

The Mono package includes a C# compiler, a .NET-compatible runtime and a pair of application programming interface (API) stacks to deal with both native Linux servers and desktops and Microsoft's own .NET Framework.

A new website, www.mono-project.com/, has been launched to act as a hub for future Mono development, providing users with access to tools such as *MonoDevelop* (a native integrated development environment), support and the latest news on the project.



Muine is a music player that has been built using Mono.

Since the release of the first beta, an estimated 50,000 users have downloaded the software and, internally at Novell, it has been extensively used in the development of a number of projects, including *iFolder* and *ZENworks*.

With version 1.0 now in the wild, Ximian developers are aiming to keep pace with Microsoft's evolving .NET Framework. Mono 1.2 – which should see the light of day by Christmas 2004 – will include support for ASP.NET 2.0, System.XML and new compilers, while version 2.0, planned for mid-2005 will offer improved support for Windows.Forms and .NET 2.0 API.

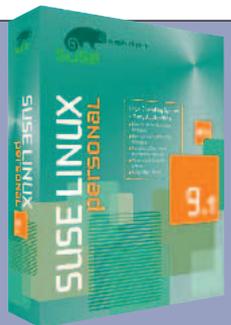
The project was launched in 2001 and was seen by some as a validation of Microsoft's attempt to drive the IT sector into an ever-closer relationship with the MS way. Ximian took a lot of flak – and some derision – for attempting to work alongside the notoriously predatory Redmond giant. For more on Mono, see pages 18 and 19 of this month's *Linux Pro*.

SUSE 9.1 PERSONAL FOR FREE

Novell/SUSE has decided to once again offer a basic Linux distribution as a free download. In the past, the company has restricted free access to either Live CDs or FTP installations from SUSE mirrors, but this break with tradition offers downloaders the option of burning a complete version of SUSE Linux 9.1 Personal.

Personal is the stripped-down single-disc distribution but, after installation, users can change the installation source to point at SUSE's primary servers for version 9.1 and gain access to all but the proprietary elements of SUSE Professional 9.1.

Understandably, the product ships without any installation or ongoing support beyond what is available on SUSE's forums. LXF's DVD readers will find SUSE 9.1 Personal on this month's coverdiscs. For CD readers, the ISOs, and installation instructions, are available from www.suse.com/us/private/download/ftp/personal_iso_int.html and you'll need a blank 700MB CD to hand to contain the software.



ISOs available now. Get 'em while they're hot!

The war that never went away

Even MSN's *Slate* magazine recommends Mozilla!

The browser wars, written off as a one-sided battle won by Microsoft, are apparently not over yet. After another bruising month for the security of *Internet Explorer*, the US Department of Homeland Security (DoHS) took the step of recommending that *IE* users migrate to more secure offerings from the likes of *Mozilla*, *Firefox* and *Opera*. The Internet Storm Centre, which monitors worldwide Internet traffic to pinpoint sources of security problems also suggested alternatives to *IE* would make browsing safer. These warnings came as a result of the latest 'phishing' scam, which attempted to use a combination of vulnerabilities in MS's *Internet Information Services (IIS)* web

server and *Internet Explorer* to install trojan software, including a key logger, onto users' computers.

Step up *Mozilla Firefox*, a web browser now seen as so superior (even MS's own house magazine *Slate* recommends it) to *IE* that is has apparently inspired Bill Gates to reconvene the *Internet Explorer* development team in order to combat the threat. Insiders at [Mozilla.org](http://www.mozilla.org) say that following the announcement by the DoHS, which followed a similar warning from the US Computer Emergency Readiness Team (US-CERT), the Firefox server logs displayed a major spike in downloads. www.mozilla.org/products/firefox



Smart, secure, and blessed by the US's scariest administrative behemoth.

Like plugins, only different

Reducing Web monoculture by untying browser standards

The Mozilla Foundation has joined forces with Adobe, Macromedia, Apple, Opera and Sun to come up with a new standard plugin architecture designed to offer a rich web experience while adhering to the standards which make the Internet work. The extensions to the *Netscape Plug In Application Program Interface* will be implemented in the next generation of *Mozilla* and *Firefox* web browsers, as well as in future releases of *Opera* and *Safari* for Apple's OS X.

Mitchell Baker, President of the Mozilla Foundation said that plugins

were a critical component of the web experience, but that the technology needed to move with the times. The new initiative, she said, would make sure uncompromised access to web sites and applications wouldn't be restricted. "This will allow users to choose among a range of browsers without sacrificing interactivity."

What remains unclear is whether the plans will result in a cross-platform plugin architecture and the long-awaited arrival of native *Quicktime* and *Shockwave* players for Linux.

newsbytes

■ As part of its strategy to 'not be evil', Google has announced it will be 'opening up' some of its own code. Wayne Rosing, the company's VP of engineering, told a group of potential recruits that the time had come for Google to "give something back." It wasn't fair, he said, for a company to pick the cream of the crop (in terms of development talent) and keep the results of their work in-house. This would not, he said, be a case of open-sourcing Google. "That would be a little dumb when we have these Microsoft guys making noise," he said.



■ **Amarok** is yet another media player for KDE. The project has recently released version 1.0 of the software that combines iTunes-like access to local music, plus decent streaming abilities and the possibility of using GNOME's native *gstreamer* as its back end. Whether this or *Juk* will achieve 'default' status in the next major KDE release, *LXF* will certainly be reviewing it next month. <http://amarok.kde.org/>

■ **Slackware 10.0** has been released, and once again the maintainers of the distribution have shown their independent streak by shipping with a default 2.4 kernel. Slack 10 does include a 2.6 kernel for those adventurous users, but, it seems, the distribution is keen on retaining its reputation for stability over razzamatazz. The package does, however, include the latest releases from GNOME (2.6.1) and KDE (3.2.3) www.slackware.org/

■ The fantastic **Wikipedia project** has hit 300,000 English-language articles. The encyclopaedia's tally of over 90 million words easily outstrips its traditional rivals – including Encyclopaedia Britannica's paltry 85,000 articles and 55 million words. The biggest threat facing the project at the moment is a lack of developers with MySQL and PHP skills. The site itself is currently serving up an average of over 60 million pages per month and, as ever, is in need of cash injections both large and small. www.wikipedia.org/

■ For the first time in the history of the European Union, a sovereign state has withdrawn its vote of support for an EU directive. On July 1 2004, the Dutch parliament directed its Secretary of State for Economic Affairs to formally withdraw support for the widely reviled directive on software patents. With the Dutch authorities setting this precedent, it is hoped that other governments will take a critical look at the directive and follow the Dutch example.

David Cartwright

David Cartwright is an IT consultant who specialises in providing Linux systems and solutions.



COMMENT

Ministry of silly forks

“ The French Ministry of Equipment (MoE) is one of the latest Government bodies to replace its Windows installation with Linux – in this case Mandrake. www.mandrakesoft.com/company/press/pr?n=/pr/business/2490. All is, however, not as it seems. Mandrake proclaims that:

“With Mandrakesoft, the Ministry chose an alternative to proprietary software, and this is a significant step towards technological independence.” And were this true, it would be a good thing.

Elsewhere in the press release, however, the company admits that *“To meet the project's needs, two specific Linux distributions based on MandrakeLinux Corporate Server were developed.”*

Let us get this straight: MoE is replacing Windows NT installations (presumably based on standard distributions of Windows NT that the entire world knows about) with a version of Linux which has been custom-built for it, and which therefore ties them into Mandrake to a certain extent. So by choosing *“an alternative to proprietary software,”* MoE seem to find itself using a specially built distro. Call me *Monsieur Picky*, but this sounds *très* proprietary to me.

There is a fine line between proprietary software and 'standard' software whose parameters have been customised and tuned for a specific customer. This project sounds like it sits the wrong side of that line. This whole story strikes me as a step backward for Linux – not just because MoE has chosen something that's not straight off the shelf, but more because Mandrakesoft thinks – and claims – that it's precisely the opposite.

Linux 'will dominate the Supercomputer sector'

The continuing lack of Microsoft's 64-bit mettle puts Linux's pedal to the metal

Latest figures suggest that Linux is currently running half of the world's 500 fastest supercomputers, but experts predict that our favourite OS is poised to dominate the sector absolutely in the future.

Analyst and Harvard Research Group Vice President Bill Claybrook maintained in an interview with Newsforge.com that Linux and Intel's fortunes appeared to be tied on the list. He said that Intel accounted for 119 of the machines a year ago, while this year's list includes 287 Xeon or Itanium systems. "That tells you right there that Linux is dominating," he said, as most of the machines were running Linux. Of this number, 243 are clusters, but Claybrook says the list will see another big shift next year, thanks to the price/performance ratio made possible by the combination of Open



Source software and commodity hardware. "Eventually, I think you'll find Linux is going to replace everything on the Top 500 list."

The fastest computer in the world – a record held since 2002 – was Japan's NEC Earth Simulator; while Linux was driving the number 2 beast, the 4096 Itanium2 processor cluster at the Lawrence Livermore National Laboratory.

In terms of vendors, IBM regained the crown it lost last year to Hewlett Packard by securing three of the top five places on the 'fastest' table.



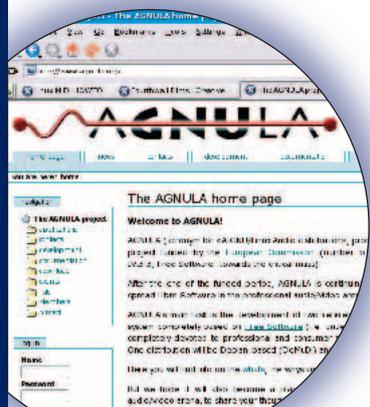
NEC's Earth Simulator retains its 'most powerful' crown for the third year.

LINUX WEB WATCH

Music to your ears...

Be entertained or get creative... or both!

MIDI, the Musical Instrument Digital Interface, has been exercising the LXF hive mind recently, in our quest to never have to reboot into an old OS again.



Our starting point on this trip was Phil Kerr's Linux-MIDI HowTo (www.midi-howto.com/), which runs through the fundamentals of getting ALSA installed, configuring devices and using Softsynths. There's even some useful stuff on latency there as well as a rundown – and links – to a wide range of MIDI players, sequencers and editors.

Once we started investigating beyond the information available from Kerr, we found the Linux Sound site (www.linux-sound.org/) which houses as near to an exhaustive selection of links to Linux musical applications as you'd ever want. We particularly enjoyed browsing the DJ

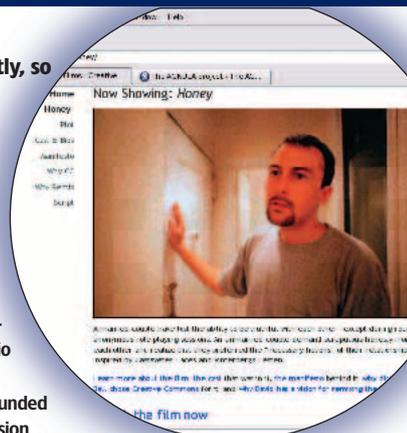
☞ www.agnula.org/
Don't go here expecting Abba's blonde chanteuse: that's *Agnetha*.

☞ www.theora.org/
It's been slashdotted recently, so a Torrent or mirror site is probably your best bet.

software section: an under-explored sector of Linux audio!

Of course, if you want to get really dedicated to the glory of song, you'll want to check out AGNULA (www.agnula.org/), the best all-in-one distribution aimed at audio users. AGNULA is a complete installable distribution which is funded in part by the European Commission with the goal of bringing audio facilities to the masses. There are versions of the distribution based on Debian (DeMuDi) and Red Hat (Rehmudi). The distro includes solutions based on ALSA, JACK, JMax, Cecilia, the Csound effects system.

Finally, if you're more interested in listening and watching, and despair at



the current dearth of decent UK soaps, www.theora.org/ is offering streams of 'free content in a free format'. The highlight on the site so far is David Ball's 'edgy relationship drama' *Honey*, which is distributed under a Creative Commons licence. (<http://creativecommons.org>)

newsbytes



■ **Element Computer** is taking a leaf out of Apple's book and attempting to tie its Linux distribution to hardware, which means everything should be optimised out-of-the-box, but with the cost benefits Linux can provide. Element's operating system solution is based on Xandros but also includes elements bought in from NeTraverse and a fully licensed copy of Windows 98, meaning applications such as *Microsoft Office*, *QuarkXPress*, *Money* and *Adobe Photoshop* will install successfully and run happily at native speeds. www.elementcomputer.com/

■ After a long wait, the powers that be in **Munich's** city hall have voted to officially adopt Linux as the desktop of choice for the city. Earlier reports had suggested that the project had fallen behind schedule due to both technical and cultural problems with the migration, but the council voted by a significant two-thirds majority to steam ahead with the plans. IBM and SUSE/Novell, which helped prepare the initial Linux bid, are favourite to get the final contract for the project, but this is not guaranteed.

■ **Red Hat** has GPLed its Global File System (GFS). GFS allows servers to read and write simultaneously to a single shared file system on a storage area network (SAN), thus improving performance and reducing complexity. GFS is said to be scalable to hundreds of servers and will work with any standard app. In addition to GFS, the entire infrastructure has also been put out under the GPL, including the CMAN cluster manager. Developers for the project needed! <http://source.redhat.com/cluster>.

■ The Search for Extra Terrestrial Intelligence (**SETI**) project has completed its transition to the BOINC (Berkeley Open Infrastructure for Network Computer) platform, releasing clients for the main computer architectures. While Windows users have a GUI for the app, users of Linux, UNIX, BSD, Solaris and OS X will have to make do with a CLI for the time being. Developers say the Classic SETI@Home client should be uninstalled before using the BOINC client as the latter has a lower CPU priority, but the original is still available.

■ **Apple** has made its Rendezvous technology, which offers zero configuration access to networks, available for Java, Linux, Solaris and Windows; and includes network protocols, identification and configuration of devices and services. <http://developer.apple.com/macosx/rendezvous/>

Allied Irish banking on desktop Linux

Securing the Punt for another Java Desktop System punter

In another corporate coup, Sun Microsystems has signed up Allied Irish Bank (AIB) as a client for its Linux-based Java Desktop System (JDS). The deal will see 7,500 desktops across the organisation migrate to Linux during 2005. The bank was lured by JDS's thin-client and desktop management tools and, a spokesman said, the financial advantages that Linux could offer.

Sun hopes that the deal with AIB will be a showcase for the banking industry, leading to wider adoption of Linux across the sector. Daniel Mayo,

of Datamonitor, told Computer Weekly that this could be a foot in the door for Sun. "A lot of banks are looking at refreshing their technology, which can be quite expensive," he said. "Linux is a good option."

Sun's Vice President of Desktop Solutions, Curtis Sasaki, said this was another example of the momentum that is increasingly building behind JDS and Linux across all areas of industry. "We are very pleased to have AIB as a client of Sun and see growing demand in the financial, education and government markets."

Dell gets Linspirational

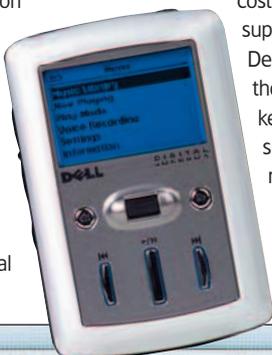
Strange 'support but not under warranty' situation

PC users in Europe can now buy a Dell computer complete with Linspire 4.5 and a year's membership to the Lindows/Linspire Click-'N'-Run warehouse.

Sold via Italy's Questar, the computers can be customised and shipped to any destination within the newly expanded European Union. The Dell/Linspire partnership in Europe was launched in tandem with the fully localised Italian version of Linspire and additional support in *ISongs*

(Linspire's own take on *iTunes*) for Dell's DJ MP3 player.

The range starts at 469 Euros (excluding local VAT) for a basic, monitor-less PC built around a 2.40Ghz Intel Celeron, 256MB RAM and 40GB hard disk. Delivery costs 30 Euros and hardware support will be provided via Dell's own support network, though the company was keen to stress that the software installation was not regarded as an 'official Dell install' and would not be covered by the company's standard warranty.



Dell's DJ jukebox is supported by Linspire's *ISongs* jukebox application.

Hoyt Duff

The co-author of *Red Hat Linux 9 Unleashed* runs a fishing pier when he's not being vociferous about users' rights on mailing lists.



COMMENT

What the future holds

“ The development and growth of Linux is phenomenal. Just recently, it took significant technical expertise and a healthy dose of voodoo to enable dial-up networking. Nowadays, the process is essentially automatic – a non-issue.

The Linux community has grown by leaps and bounds, exhibiting a significant web presence: a Google search on the term returns 111,000,000 hits! Another positive indicator is the number and quality of publications focusing on Linux, such as *LXF*. I am astounded that the quality of documentation seems to be improving as well! Linux is more than ready for the desktop, the server... the world.

And what will become of beloved GNU/Linux? If we do it right, Linux will become a wholly ubiquitous, anonymous commodity. Its existence as a freely available, easily modifiable, and powerful operating system has it destined to become an ever present undergirdment of our world.

Is this a bad thing? Not at all. I remember when *VisiCalc* rocked the world: it was a marvel of an electronic spreadsheet. Alone, it was simply a novelty, but the creative use of spreadsheet software has helped transform the world. Emphasis on Linux itself will be refocused to what can be accomplished with it. The New Zealand stock exchange now uses a stripped-down version of Linux to run its Oracle database with fantastic results. Both Oracle and Novell see Linux as a commodity OS for their products.

The Revolution will have succeeded when we no longer need to think about Linux. Not long now... ”

Skype hyped for Linux

Cross-client capability still needed before mass adoption of VoIP can take off for High Street consumers



Skype brings VoIP to cross-platform chatters.

Voice over Internet Protocol (VoIP) is being hailed as the next big thing in the computer revolution. The ability to talk over the already established IP network that spans the world has the potential to make international calls a no-cost endeavour.

Skype, which uses the same peer-to-peer technology as the KaZaA file sharing network, is said to offer better-than-phone quality, full-duplex chat to users across the world. And now there's a beta client for Linux.

The package is available in RPM format for SUSE, Mandrake and RedHat/Fedora and Sun's Java Desktop System, and system requirements are a 400MHz x86 PC, 128MB RAM, a working sound system and, ideally, a broadband connection. The system allows users to talk to other Skype users without, currently, having to negotiate pages of ads, firewall problems, or constantly dropped calls; see the site www.skype.com/download_linux.html. We hope to bring you more reports and a review in forthcoming issues.

UPGRADE YOUR KERNEL!

A new security hole has been found which would allow a local attacker to bring down a system with just 24 lines of code. The vulnerability, christened **evil.c**, affects both 2.4 and 2.6 series kernels on x86 and x86_64 machines, but has been classified as 'low risk' by most vendors, as anyone wishing to exploit the hole would need shell access to a machine. Root access, though, is not required.

Kernel patches were released swiftly, and users/sysadmins are being urged to patch all affected machines. Andrew Morton, maintainer of the 2.6 kernel series, said the threat wasn't very serious. "Bugs wherein local users can lock the machine up are not uncommon, and local users have always been able to bring a machine to its knees anyway - say, by using up all the memory," he said. Morton also criticised the pair of programmers who discovered the flaw for not notifying the kernel team before releasing the exploit into the wild.

EMBEDDED LINUX NEWS

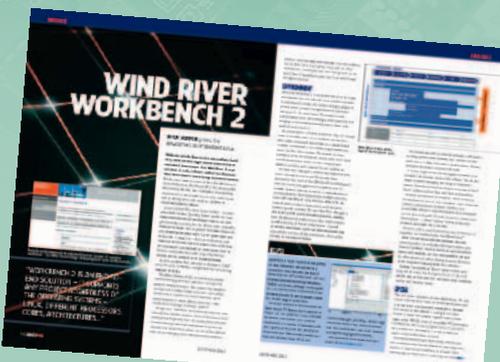
- Embedded Linux took another step into the mainstream with the release of the Consumer Electronic Linux Forum's first official specification and reference implementation for embedded consumer devices. This premiere release incorporates work from several of the groups working within the forum, expanding on a number of platforms supported by the original **CELF source tree**. Scott Smyers, Chair of the CELF Steering Committee, said the release of the specification was "a reaffirmation of the strong desire of major CE vendors to promote and use Linux as a major technology component of digital CE products."

- Spherex, one of the world's largest speaker manufacturer and supplier of the Xbox sound system, has signed a deal with Empower - a maker of **Linux PDAs** - to create a new range of audio products built on embedded Linux. The series will feature the same Optimised Surround Sound system used in the Xbox which will be coupled with a hardware player built on Linux technology from Empower. The devices will be licensed and released under a variety of brand names.

- Adobe has launched a new version of its **Acrobat Reader for Linux CE** software. This embedded version will first be seen on Sony's new Japan-only GPS system. The Sony HDD AV Navi device is intended to be a fully-fledged in-car information point, so data, such as maps and travel guides can be uploaded to the device in PDF format for later access on the road. Adobe says it is in talks with many other manufacturers about bringing the technology to Linux-based mobile phones, set top boxes and personal video recorders.

- South Korea's Samsung Electronics Co has launched the first Linux-based **NAND Flash software solution for next-generation mobile phones**. Samsung's Linux NAND Flash memory software allows the NAND Flash memory to store code as well as data, and so should lower overall costs and reduce space requirements in mobile handhelds.

- For more on embedded Linux, see pages 16 and 17 of this month's *Linux Pro*, and see page 18 for a **Sharp Zaurus** review.



New to Linux, but established in the embedded world.

SCO NEWS

- The wheels of justice move at a snail's pace, and this seems doubly true in the US. Of note recently, IBM's lawyers berated SCO's latest attempts at prolonging the case. Despite earlier claims in the press by Darl McBride and others that they had "tons, sackfuls" of evidence that IBM was illegally contributing code to Linux, the company had yet to show "one single line of code" to back up the claims.

- In March and April this year, SCO management spent US\$2.5 million buying back 290,000 shares of common stock. Its directors have authorised the purchase of 1.5 million shares of stock on the open market over the next 24 months.

Catch up with all the latest from Pamela Jones at www.groklaw.net/

WineX 4 unleashed and renamed

Rebranding exercise ends confusion between Wine and WineX

TransGaming has released a new version of its Wine-based games product for Linux. WineX has been rebranded Cedega and, according to the company, now supports over 300 games out of the box. New additions

to the support lineup includes *Hitman: Contracts* from Eidos, EA's *Battlefield Vietnam* and *Star Wars Galaxies*. TransGaming also says the highly anticipated *World of Warcraft* massively multiplayer online RPG will

be supported from the moment it goes live.

Company co-President Vikas Gupta said Cedega marks a sea change in the maturity of the project, hence the new name. "The new name, Cedega, is meaningful and reflects the significant growth that both the product and TransGaming have enjoyed over the last few years," he said.

Gavriel State added that he thought that the release represented a real "milestone in game portability" pointing out Cedega's support for the DirectX 9.0 API as well as technologies such as pixel and vertex shaders. "Cedega 4.0 also includes a new advanced inter-process communication architecture that can double the speed of games which make heavy use of Win32 kernel synchronisation primitives," he said.

Cedega is the first release from TransGaming to get a full European release. Customers and subscribers can now pay in Euros while the installer has been updated to include support for Dutch, Danish, Portuguese and German in addition to English.



Star Wars Galaxies comes to Linux via Cedega – the new name for WineX.

Opening up the Looking Glass

3D desktop paradigm to completely change our computing experience?

Project Looking Glass, Sun's next-generation 3D desktop environment for Linux, will have been released under an Open Source licence by the time you read this.

Looking Glass was created as a side project by senior engineer Hideya Kawahara, but is still at an early development stage. Sun has promised the project will be 'handed over' to the Open Source community "once it's completed." The company has been under considerable pressure recently over its ambivalence on the question of Open Sourcing Java

Kawahara, who has worked a couple of hours every day on the project for the last two years, says he was inspired by reports of the next-generation desktops from Microsoft and Apple, and set about creating something to 'advance Linux' at the same pace.

The roadmap for releasing Looking Glass as Open Source is not clear – but it's likely it will be GPLed, and

Kawahara says he is looking forward to seeing what other hackers within the community can do with the codebase.



Sun claims Looking Glass will change the way we interact with the desktop and not just be lots of fancy-looking eye candy.

Jono Bacon

The founder of UK Linux, KDE developer and all-round nice guy, Jono is also a musician whose tunes have been featured on Slashdot.



COMMENT

Curiouser & curiouser...

“ It came as a little bit of a surprise to many people when Sun decided to Open Source its futuristic 3D desktop environment *Project Looking Glass*; when it looked like a technology with some real potential, but a technology that would most likely be made available under a restrictive licence.

At a time when Sun appears to be getting pistol-whipped by just about everyone, it has managed to pull this 3D gem out of the bag to a joyous chorus of great PR.

In some ways, it could be said that Sun has actually made its life harder. *Project Looking Glass* could face problems due to its close dependency on what many consider will never be a free technology: Java. This could face particular problems if the software is to enter Debian; remember the problems with KDE's dependency on Qt in the days before Trolltech GPLed it – we could experience the same issues with *Project Looking Glass*.

It makes me wonder what exactly Sun is still trying to hold onto with Java. The organisation has come forward with a plan to embrace Linux, it has open-sourced Solaris, *OpenOffice.org* and *Project Looking Glass*, but Sun is still clutching Java with a tightening grip. If it were to open up Java and allow the community to continue developing it, Java usage would rocket in the Free Software world; I'm confident Sun could still maintain its authority on the code. We only have to look at Trolltech to see how a company can happily maintain a handle on development even though an app is GPLed. Come on, Sun – take the plunge and Open Source Java – we don't bite... ”