

printout

Keystone MacCentral Macintosh Users Group ♦ 717-932-4009 ♦ <http://www.keystonemac.com>

ACD/Deneba's Curtis Christensen Will Demonstrate the Graphics Program Canvas 9

by Tom Bank

Some of the most interesting programs that our club has hosted over the years have been ones that featured a visiting representative of a Macintosh hardware or software developer who put a featured product through its paces. Keystone MacCentral's January meeting will introduce a new twist to this concept when Curtis Christensen, Public Relations Manager for ACD Systems of America, introduces Version 9 of ACD/Denebas Canvas graphics program, but from the comfort of his home in Florida. To do this, he will use both high speed internet and separate speaker phone connections.

For those not familiar with it, Canvas has been around quite a while. It dates back to the long-ago gray scale days of Macintosh computing, but like the Mac itself, Canvas has come a long way. Unlike other mainline graphics programs, Canvas takes a generalist approach to the whole graphics field. Originally it could do both raster (bitmapped or painting) and vector (line drawing) type graphics. More recently it developed the ability to do them in the same document. And now it can apply the wide range of filters normally used with raster graphics to vector graphics and text as well, without losing the ability to modify the vector design or text in their original form. Add to that the ability to do slide type presentations, to develop animated GIFs, to build web pages and whole sites,

and to turn out flowcharts, plus versions of the program with specialized medical and scientific or geographic mapping graphics features and you have an outstanding software package. Then consider that the presenter is someone who lives with the program and is in constant touch with all the real software developers and we have a can't-be-missed program (unless it snows — in which case we will hold the presentation off until February).

So everyone is invited to participate in this meeting, to see both what the latest technology can do to connect companies with their customer base and to see the latest capabilities of the premiere all-in-one graphics program. Since Canvas is a thoroughly cross platform package, invite your artistic friends regardless of whether they use the Mac or

Windows platform and whether they are principally photo, paint, vector drawing, presentation, or web graphics oriented. Canvas can do them all and, more importantly, can do them in the same document. For that matter, invite your artistic friends whether they use a computer in their graphics pursuits or not. After seeing this program they may become converts!

For more on the Canvas program, to see our product review, for directions to the meeting, or to get info on weather related delays, see our Keystone MacCentral website <<http://www.keystonemac.com/>>. You can also go to ACD/Denebas website <<http://www.deneba.com/>> for further information, links to other reviews, and a free trial download of the complete program. ☺

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Keystone MacCentral is a not-for-profit group of Macintosh enthusiasts who generally meet the third Tuesday of every month to exchange information, participate in question-and-answer sessions, view product demonstrations, and obtain resource materials that will help them get the most out of their computer systems. Meetings are free and open to the public. The *Keystone MacCentral Printout* is the official newsletter of Keystone MacCentral and an independent publication not affiliated or otherwise associated with or sponsored or sanctioned by any for-profit organization, including Apple Computer, Inc. Copyright © 2004, Keystone MacCentral, 1020 Pines Road, Etters, PA 17319.

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The Way We Were

December 16, 2003



Business Meeting

President Ed Benninghove brought the meeting to order and asked for board member reports. Linda Smith announced the addition of the December newsletter to our web site. She also added a holiday fun page, including links for a virtual snow globe and the NORAD Santa tracking site. We downloaded a shareware program called Snow 1.1 which was displayed on screen. Chuck Joiner brought in some Total Panther magazines which were being sold at a discounted rate. Jim Carey told members that the auction was one of the most successful ones we have ever had. The printout listing the URL for the user group specials page was distributed to those members who did not get a copy at the November meeting. Jim informed members that the club would soon begin e-mailing announcements and special offers to interested members. Abigail Schearer reported sending out individualized thank you letters to the many generous vendors who donated items for the auction.



Q & A & Comments

Eric Adams reported continuing problems with networking

under OS X, wherein he has to log into the server every five minutes or so. Apple's discussion groups had several mentions of others having similar problems, but no solutions were offered. Eric could try pulling any network preferences from his home and system libraries and logging out and back in to see if that helps. Printer networking was discussed. The printer needs to be able to talk to multiple computers simultaneously. If it is not capable of this, some options are available. Tucker Hill had a System 9.2 question. His mouse pointer sometimes freezes when opening an e-mail. He was told to try unplugging his USB mouse and then plugging it back in to see if this cures the freeze. Gary Brandt asked about the best way to send payment overseas to register shareware. Ed Benninghove suggested registering with PayPal or Kagi and using those services. Beware of any e-mails you receive saying a company you deal with has lost your password or account information. That e-mail is most likely a scam. You could contact the company directly (**not** using the link in the e-mail) and ask if they have sent you a legitimate request. Jim Carey showed off his new 6.3 megapixel Canon digital camera. Prices have dropped drastically and you can now get more features for less money than you would have spent a year ago. We viewed

some photos from a digital photography project called America 24/7, available online at the digitaljournalist.org site.



iContest

We watched the four entertaining and very well done entries for the iContest. Balloting was done by members and three winners were to be announced. Voting was so close, however, that we ended up with a tie for third prize. Members were asked how they wanted to resolve the tie and it was decided to flip a coin to settle things. The board announced that it had decided to award one of the raffle prizes as a consolation prize for the person losing the coin flip. The consolation prize was awarded to Linda Cober who chose an Apple sweatshirt from among the raffle items. A \$20 Best Buy gift certificate went to third place winner Wendy Adams. Chris Fry won second prize, a \$30 Best Buy gift certificate. The first place winner was Eric Adams, who received a \$50 Best Buy gift certificate.



Raffle Winners

The winner of the raffle was Tom Dobryzyn. He chose the Unitray mousepad as his prize. 🗑

Shootout at the Disk Repair Corral

Part 2

Many modern disks, including many internal ATA, FireWire, and USB drives, automatically spare sectors with hard errors the next time the sector is written. That's helpful, but if data is stored on that sector, programs may be unable to read it successfully, causing problems and making it difficult to spare. Erasing the disk with Apple's Disk Utility spares any bad sectors if you select the "Zero all data" option.

What about soft errors? In addition to the 512 bytes of data stored in each sector, a few additional bytes hold an error correction code (ECC). When the sector is written, the drive's controller computes and records the ECC. When the file system later reads that sector, it checks the ECC to make sure the data hasn't been corrupted. If the ECC doesn't match the data, it's called a soft error. The disk surface is fine, but the data on that sector has become scrambled.

Soft errors can be caused if the disk is jarred while it's writing or if power is lost while writing, either of which can leave a sector half written. Large magnets (such as can be found in electric motors) next to hard disks also tend to have bad effects on the data. As with hard errors, most modern disks repair soft errors automatically the next time the sector is written.

Bad Sector Detector - Norton Disk Doctor, DiskGuardian and Drive 10 (but not DiskWarrior or Disk Utility) claim to detect bad sectors using a test called either a

"defective media check" or a "surface scan." Using a proprietary tool that creates soft errors on disks, I tested each program.

Although Norton Disk Doctor claims to be able to find and repair bad sectors, its defective media check didn't detect the bad sectors on my test disk, erroneously giving it gave a clean bill of health.

DiskGuardian detected the bad sectors, although it took several hours to run a full check. Unfortunately, it didn't tell me which files used the bad sectors, so I had no way of finding out which files were damaged and would thus need to be restored from backup. DiskGuardian lacks the capability to repair bad sectors.

Like DiskGuardian, Drive 10 detected the bad sectors, but didn't identify which files were damaged. Confusingly, Drive 10's report describing the damage claimed it could fix the bad sectors, but I couldn't find a command to fix them. Micromat tech support confirmed the report was wrong; Drive 10 can't fix the bad sectors it finds. It's too bad, since Drive 10 could fix the bad sectors merely by writing zeros to them.

Although Disk Utility cannot scan for bad sectors, it can fix bad sectors on modern disks if you erase the disk with the "Zero all data" option selected.

I must rate all these products unacceptable in dealing with bad sectors. Even though two could

detect bad sectors, none of them could tell you which files contain bad sectors, making it impossible to learn which files you should restore from your backup. Only Disk Utility successfully fixed the bad sectors, but at the price of erasing the entire disk.

Ripping the Yellow Pages — We've now looked at pure hardware failures, and bad sectors, which can be either hard errors or soft errors, and so far, our disk repair utilities don't help much at all. Now it's time to move on to problems that exist entirely in software, the most common type of which are errors in the directory, which tracks the files and folders on the disk. In the case of directory errors, there is nothing wrong with the drive mechanism or the disk surface; instead, the directory information that's necessary to locate your data on the disk has simply become scrambled. Often your data is intact, if it could just be located.

As an aside, people with important data sometimes use mirrored disks or RAID arrays, which faithfully duplicate each byte on the main disk to a backup disk. If the main disk suffers a hardware failure or develops a bad sector, the backup disk can save the day. However, it's worth noting that this strategy provides absolutely no protection against directory damage. That's because the RAID faithfully records all data to the backup disk, whether or not that data is good, which results in both the main disk and the backup disk containing corrupt data. I may sound like your mother telling you to eat your vegetables, but the best protection really is regular backups.

The most common cause of directory damage is crashing. If the computer crashes while a file is being created or saved, causing only part of the change to be written to disk, the directory will contain inconsistent information. Mac OS X crashes far less often than

Mac OS 9, but directory-corrupting crashes can and do still occur. Both Mac OS 9 and Mac OS X automatically check and repair the startup disk after a crash, which reduces the incidence of disk damage dramatically.

A new feature in Mac OS X 10.3 Panther that should reduce directory errors even more is the journalled file system. You can enable it in Disk Utility, and it's usually turned on for disks onto which you install Panther. Here's how journaling works. Before the file system changes the directory, it leaves a note on the disk saying, "I'm going to make this change in the directory." Then the file system makes the change, and once it finishes, it clears the note. If the file system ever sees an incomplete change note on the disk during startup, it knows something bad happened and "rolls back" the directory to its previous state. You will lose your last change, but the directory won't suffer any damage.

Other causes of damaged directories include buggy programs that write bad data to disk, buggy programs that overwrite cached data waiting to be written to disk, and even bugs in the file system itself. The first two are much less likely in Mac OS X than in Mac OS 9 because of its file privileges and memory protection, respectively. Bugs in the file system are extremely rare but have occurred at times in the past.

It's worth noting that directory damage is not always readily apparent. A damaged disk may appear to operate perfectly, but regular use can cause minor errors to grow into serious problems. Most directory problems are easy to fix if they're caught early but can be difficult, if not impossible, to fix later. That's why checking and repairing startup disks automatically after a crash is so important, and why it's essential to leave the Check Disk option turned on in

Mac OS 9's General Controls control panel (the disk check isn't optional in Mac OS X).

To test how the disk repair utilities perform with different types of directory errors, I created an HFS+ disk image, copied an assortment of files and folders to it, and then used a low-level disk editor to damage various directory data structures. I then duplicated the damaged disk image, and let each utility try to repair its own copy. Each utility repaired an identical disk image, with identical damage.

Errors Speak Volumes — For my first test, I started with relatively simple damage in the volume bit map, which is also known as the allocation file. The volume bit map tracks which blocks on the disk contain files, and which are unused. All five utilities fixed my damaged volume bit map easily.

Next up was damage to the volume header, which tracks vital information about the disk, such as the amount of used and free space, and the locations of the catalog and allocation file. The volume header is stored at the beginning of the HFS+ partition. I erased the volume header's signature, which makes the file system assume the volume header is corrupt and refuse to use the disk. Fortunately, the file system keeps a backup copy of the volume header at the end of the disk; it's imaginatively called the alternate volume header. All five of our utilities successfully repaired the disk, although Drive 10 and DiskGuardian couldn't figure out the name of the damaged disk.

Catalog Catastrophe — The catalog b-tree tracks all the files and folders on the disk. It's a vitally important part of the directory, and many of my tests focus on it. The catalog is divided into nodes, and each node is divided into records. Most records track a file or folder on the disk, although some contain threads or indexes, which are

used internally by the file system to look up files and folders.

The first node in the catalog is called the header node, which points to other key nodes. I erased the header node. Norton Disk Doctor, DiskWarrior, and Drive 10 recreated the header node properly; Disk Utility and DiskGuardian failed to fix it. Once again, Drive 10 couldn't figure out the name of the damaged disk.

The header node also contains a map which tracks which nodes are used and which are free. I corrupted this map, but my corruption didn't faze any of the utilities, all of which successfully fixed the header node map.

The nodes in the catalog are linked together in a precise pattern of connections. Horizontal links connect nodes on the same level, and downward links connect the levels. The file system relies on these links to look up files and folders. I damaged these links. As happened when I erased the catalog header node, Norton Disk Doctor, DiskWarrior, and Drive 10 fixed these links, but Disk Utility and DiskGuardian weren't able to put the links back together.

File and folder records are stored in alphabetical order in the catalog. I rearranged these records, putting them in random order. All the utilities restored the alphabetical order.

Certain characters, such as a colon, are illegal in file and folder names. Normally, the operating system prevents you from typing an illegal character when saving a file or creating a folder, but it's not inconceivable that unusual circumstances could cause one to appear. I renamed a folder with a colon by inserting the colon directly into the folder record in the catalog. With this test, the results start to become more interesting. Disk Utility and

Continued on page 6

Shootout at the Disk Repair Corral

DiskGuardian didn't detect any problem. Drive 10 noticed the illegal character, but didn't fix it. Norton Disk Doctor and DiskWarrior both fixed it properly by replacing the colon with a legal character.

More Catalog Corruption — Each catalog node ends with a map that points back to the records in that node. I damaged the map for one of the nodes, which sounds bad, but it's still possible to find the records by calculating the size of each record to find the next record. Disk Utility and Norton Disk Doctor realized there was a problem, but they couldn't fix it. Drive 10 and DiskGuardian both identified and fixed the problem, but in the process lost five and six files, respectively. Partial repair isn't always better than complete failure, since you may believe the disk was repaired successfully and only later - potentially much later - realize that some files have been lost. DiskWarrior fixed the catalog node map properly.

Next, I changed a thread record to be an unknown type of record, which creates two problems. A thread record that the file system relied upon was missing, and it was confronted by a record with an illegal type. Disk Utility and DiskGuardian detected the corruption, but couldn't fix it. DiskWarrior fixed the problem but lost some of the data in one file. Only Drive 10 and Norton Disk Doctor managed to repair my damage properly.

Note that DiskWarrior moves any files it suspects may have problems into a folder called Rescued Items. In my tests, most of these files turned out to be fine. This approach has the advantage that it's clear which files may be damaged. But if the Rescued Items folder contains

many files, checking them and putting them away can be tedious. Norton Disk Doctor can optionally put aliases to damaged files in a folder, a potentially more helpful feature. But in my tests it didn't work. Norton Disk Doctor also lists the names of damaged files in its report.

The most important aspect of a file record is the location of the file's data on the disk. One of the worst sorts of directory damage that you may see happens when two files try to occupy the same physical space at the same time. Different utilities refer to this problem as "overlapping extents" or "cross-linked files." In the best case, one file has entirely overwritten the other, since then one file has valid data, while the other's data is completely gone. In the worst case, the two files somehow manage to interleave their data, which results in both being damaged beyond repair. I cross-linked two files, thus damaging the files' catalog records, as well as the volume header and volume bit map. Disk Utility and DiskGuardian repaired the catalog records, the volume header, and the volume bit map, but they didn't actually separate the two files. In contrast, Drive 10, DiskWarrior and Norton Disk Doctor fixed the damage and separated the files. It's important to realize that the data in the overwritten file couldn't be recovered, but not through any failing of these repair programs. When one file overwrites another, the unlucky file has no chance of surviving the encounter.

I See Fraggd People — Some months ago, I wrote an article for TidBITS explaining why defragmenting disks generally isn't worthwhile (see "*Optimizing Disks Is a Waste of Time*" in TidBITS-686). Although fragmentation is totally normal and acceptable, serious fragmentation requires additional directory structures, and they too can

become corrupted and require repair.

<<http://db.tidbits.com/getbits.acgi?tbart=07254>>

Using another proprietary tool, I fragmented a disk very badly, which breaks files into so many pieces that the file record in the catalog b-tree can't track them all. The file system responds by creating new records in the extents b-tree to help track all the pieces. The extents b-tree is like the catalog b-tree, but exists solely to help track highly fragmented files. Again, severe fragmentation is not inherently a problem, but I had put the disk into a precarious, if legal, state. I then damaged two extent records so the file system couldn't find all the pieces to two files, but I damaged each in a different way. Disk Utility, DiskGuardian, and Drive 10 all detected my damaged extent records, but weren't able to repair the damage. DiskWarrior and Norton Disk Doctor performed better, fixing the problem but losing part of the data in one file. Considering the type of damage I inflicted, they did as well as could be expected.

HFS+ volumes are enclosed in a "wrapper," which is actually a plain old HFS volume. The reason for the wrapper is historical. Apple first released HFS+ with Mac OS 8.1. If you connected an HFS+-formatted disk to a Mac running Mac OS 8.0 or earlier - in other words, one that understood only the older HFS format, the wrapper kept the older system from deciding the HFS+ disk was damaged and offering to initialize it. For my next test, I damaged the catalog b-tree header node in the wrapper. Disk Utility and DiskGuardian didn't notice anything wrong. Drive 10 and DiskWarrior detected the corrupt wrapper, but didn't fix it. Norton Disk Doctor identified the damage and fixed it properly.

Disks can contain multiple partitions, which are listed in a partition map at the beginning of the disk. Since disk images don't have partition maps, I used an external FireWire hard disk for this test, in which I damaged the partition map, making the disk driver's partition overlap the HFS partition. Of all these disk repair utilities, only Norton Disk Doctor claims to check partition maps, and indeed it was the only one to detect the problem, although even it proved incapable of fixing the overlapping partition map. Luckily, damaged partition maps are extremely rare, which may be why none of the other utilities bother to check them.

The Grand Final — Finally, I decided to recreate the worst damage I've ever seen on a Macintosh hard disk. Starting with the badly fragmented disk above, I corrupted and overwrote various parts of the catalog and extent b-trees. In some nodes I corrupted the node header (not to be confused with the header node), in some I munged the data records, and in others I zapped the record offset map. A few lucky nodes suffered all three types of damage at the hands of my disk editor. Only DiskWarrior was able to bring the disk back to a usable state, although 35 files were either lost or partly damaged. That 35 files were lost or damaged is not an indictment of DiskWarrior; the program couldn't have done any better, considering how much vital information had been destroyed. None of the other utilities managed to repair the disk successfully.

And the Winner Is... Of my 15 tests, DiskWarrior fixed 12 successfully, Norton Disk Doctor fixed 11, Drive 10 fixed 9, DiskGuardian fixed 5, and Disk Utility fixed 4. "Fixed" includes cases where recovery may not have been perfect, but was good enough.

So what, in my professional opinion, should you do if your disk starts acting up? First, try Apple's

free Disk Utility. It may fix only a limited set of problems, but when Disk Utility finds a problem, it's invariably correct, and it applies fixes only when it's absolutely certain it knows the correct fix. I've never seen Disk Utility accidentally make a problem worse, something the other utilities can do, even if only very occasionally.

If Disk Utility doesn't succeed, let DiskWarrior do battle with your damaged directory. It was our overall winner, and it deserves its excellent reputation. DiskWarrior can also show you a preview of the repairs before you accept them, which lets you check that a damaged file or folder really was fixed before DiskWarrior makes the fix permanent.

If DiskWarrior fails, give Norton Disk Doctor a try, since it can address some problems that DiskWarrior misses. After that, try

sacrificing chickens. Seriously, if the combination of Disk Utility, DiskWarrior, and Norton Disk Doctor can't repair your disk, you can either restore your data from backup, or, if that's not possible, decide if the data is sufficiently important to pay DriveSavers for recovery.

I still think the most important data protection utility you should own is a backup program. But sometimes a good disk repair program can save the day by repairing minor damage quickly so you don't have to run through the time-consuming process of reinitializing your hard disk and restoring from backup.

[David Shayer was a senior engineer on Norton Utilities for Macintosh 3.0, 4.0, and 5.0. Before that he worked on Public Utilities, a disk repair program that won the MacUser Magazine Editor's Choice Award, and on Sedit, a low-level disk editor.] ☞

Oh, And One More Thing...

MicroMat's TechTool Pro 4 was released after David Shayer wrote his article *Shootout at the Disk Repair Corral*. TechTool, in its previous incarnations, has been around for a long time, in computer years. And it definitely deserves mention in the list of disk repair utilities.

TechTool Pro 4 contains updated versions of its time-tested repair and diagnostic features. Like volume repair and data recovery, which can save the most important element of your computer: your data. Like its predecessor, TechTool Pro 4 can also tests all of the critical hardware on your system like the CPU, memory, controllers and even the power supply that feeds all of these devices. The program can also check other important aspects of your system like internet connections, network and even some third-party external peripherals.

And it still allows users to unfragment their hard drives.

MicroMat has included a feature which they call eDrive. The eDrive feature allows you to create an invisible emergency volume from your existing drive. This new partition is created WITHOUT the need to reformat your current drive and allows you to store a copy of your system, a copy of TechTool Pro and even allows you to make room for other utilities. If you ever have trouble with your main drive, simply restart your computer and your system will start from your Emergency Drive giving you immediate access to the utilities you'll need to resurrect your main drive. Now there's no more need for a bootable CD or ancillary hard drive for system drive repair or maintenance. ☞

Rumors and Reality

Around Apple

- The name iWrite was recently trademarked by Apple. Speculations suggests that iWrite might be an upscaled word processor derived from Appleworks.

- Apple confirmed that US-based owners of the original and "Gigabit Ethernet" G4 PowerBooks will be able to participate in an upgrade program through March 27, 2004. To participate in the program, customers will need to contact AppleCare directly, at 800-275-2273. Apple will provide \$700 credit for laptops that qualify.

- Look for Apple's 17-inch displays to go away as the company introduces 30-inch displays. It is expected that the connector cable will terminate in three connectors. Inexpensive external adaptors would allow users to connect to old Macs and even PCs.

- Hewlett-Packard Co. announced that it will begin selling an HP-branded iPod and will start installing Apple Computer Inc.'s iTunes software on its consumer desktops and laptops.

- January 24 marks the 20th anniversary of the Mac.

- The Mac Expo opened in San Francisco on January 6. Steve introduced software upgrades to Final Cut Express 2 and iLife (a bundle that includes iTunes, iMovie, iPhoto). Xserve G5 was also announced.

A new program, GarageBand, is now included in iLife. GarageBand is geared to the musician in all of us. It allows people (even the musically challenged) to create their own music. GarageBand is like having over 50 musical instruments, a studio of professional musicians and the best recording engineers right at your fingertips.

Over 1,000 professionally pre-recorded audio loops can be combined to make complete songs or backing tracks. Vocals and live instruments such as guitars can be recorded digitally via microphone or analog input. All these tracks can be edited and mixed together with over 200 pro-quality effects presets, including pro-quality effects such as reverb and echo, and the built-in expertise of professional recording engineers.

GarageBand can also export completed songs to iTunes for burning to CD, encoding in MP3 or AAC, transfer to iPod or for use in the other iLife applications.

For an extra \$99, Jam Pack triples the music content for musicians and aspiring musicians alike with over 2,000 additional loops including many for hip-hop and electronica; over 100 additional software instruments, including a concert grand piano and 12 string guitars; over 100 additional pro-quality effects presets; and 15 additional guitar amps, including surf, grunge, heavy blues and atmospheric.

And, yes, Steve did introduce the iPod mini. It goes for \$249, is smaller than the iPod, comes in colors, has a 4Gb hard disk, and holds about 1,000 songs. It targets the \$100 - \$200 flash MP3 players. Speculation has the price of the iPod mini dropping in the near future. We expect about \$200 within four months.

Garageband.com, billed as the Internet's largest legal source of free MP3 music, and Apple Computer have signed an agreement to share the name "GarageBand." The deal was signed in April 2003 but both parties kept it confidential until now. According to the press release, Apple has paid Garageband.com a

one-time fee in order to use the name for its new music creation software GarageBand

- I missed this tidbit while watching Steve's keynote address. Apple has apparently decided to stop offering free downloads of iMovie and iPhoto as part of a shift to try to recoup more of the dollars it invests in creating software for the Mac.

Waiting For Photoshop CS

Waiting for Photoshop CS to open that image? Seems as though it's checking to be sure you're allowed to see it. Images of the new \$20 bill are considered a no-no.

Apparently Adobe has incorporated code that checks for watermarks and Digimark info. The new currency has watermarks. Digimark can be embedded in printed matter as well as digital.

Longhorn Shortly after Panther was released, Redmond began promoting their new OS, Longhorn. Longhorn is the official name; nicknames range from Wronghorn to names that cannot be mentioned in the company of the fairer sex. Actually Longhorn is still in the development phase. Some estimates place its release in a two to three years. Which is curious considering that copies can be purchased now in Malaysia for \$1.58. How do they do that?

Target Google: Google is so good at searching web pages that "google" has become a new word in the English lexicon. Now Google is facing some new competitors.

Groxis has developed the Northern Lights search engine (Northern Lights itself went out of business.) The engine can actually can use other search engines simultaneously — Yahoo, MSN, Alta Vista, Fast, Teoma, and WiseNet. In the works are AskJeeves, eBay, LinkedIn, and job site Monster.

Their product is named Grokker and will sell for \$49. A preview version is currently available for the

by Tim Sullivan

January Software Review



DejaMenu 1.0
<http://homepage.mac.com/khsu/DejaMenu/>

DejaMenu.html

There are times when accessing the Menubar at the top of the screen becomes an aggravation. For instance, consider using a laptop on one of those really cramped economy airline seats. You know, the ones where you have to lift your elbow above the arms of the seat in order to take a deep breath. On my laptop, it takes several swipes across the trackpad to get from the dock to the menu bar.

DejaMenu is the solution. It will display the current application's main menu as a contextual menu when a key combination is pressed. The first time DejaMenu is launched, you will be prompted to enter a key combination to activate DejaMenu. Make sure that you pick a combination that isn't used by you in any other applications. The key combination must include modifier keys, and the cmd (apple) key is required.

DejaMenu is particularly useful for people using multiple monitors. Since the Menubar only appears on a single monitor, it is awkward to use applications on a different monitor. DejaMenu solves this - just press the configured key combo, and a copy of the Menubar is right there for your to use.

If your mouse can simulate key-presses, DejaMenu becomes

even more useful. For instance, on a 4-button trackball, the fourth button can set to bring up DejaMenu by simulating key combination when clicked.



Apple updates this month

The following software updates have been released by Apple. For OS X users, select System Preferences > Software Update to have the system check your system files against current updates. To determine your specific pre-OS X systems update requirements go to <http://www.versiontracker.com/systems/system.shtml>. This site lists the updates by Mac model and by OS system. The Apple Support Download page <http://www.info.apple.com/support/downloads.html> contains a list of featured software downloads and a link to recently posted software.

Security Update 2003-12-19 (Panther) 2003-12-19

Required
– Mac OS X 10.3.2 Client and Server

Security Update 2003-12-19 delivers a number of security enhancements and is recommended for all Macintosh users.

Security Update 2003-12-19 (Jaguar) 2003-12-19

Required
– Mac OS X 10.2.8

Security Update 2003-12-19 delivers a number of security enhancements and is recommended for all Macintosh users.

Java 3D and Java Advanced Imaging Update 2003-12-17

Required
– Mac OS X 10.3.1 or later and Java 1.4.1 or later

This update contains support for Java3D and Java Advanced Imaging. Java 3D extends the Java platform, providing additional capabilities for running three-dimensional graphics applications and Internet-based 3D applets.

Java Advanced Imaging (JAI) Update extends the Java platform, providing additional capabilities for running image processing applications and imaging applets in Java.

Mac OS X 10.3.2 Update 2003-12-17

Required
– Mac OS X 10.3 or 10.3.1

The 10.3.2 Update delivers enhanced functionality and improved reliability for Mac OS X v10.3 "Panther" and is recommended for all users.

Key enhancements include:

- improved file sharing and directory services for mixed Mac and PC networks
- more robust printing to PostScript printers
- improved font management
- updated Mail and Address Book applications
- new ATI and NVIDIA graphics drivers
- FileVault, FireWire 800, WebDAV and USB Printing improvements from Update 10.3.1
- previous standalone security updates

Apple has identified an issue with external FireWire hard drives using the Oxford 922 bridge chip-set with firmware version 1.02 that can result in the loss of data stored on the disk drive. Even with the improvements available in this update, Apple recommends you update the firmware on your FireWire drive. Please contact your drive manufacturer for more information.

Battery Update 2003-12-17

Required

- Mac OS X 10.2 or later

The Battery Update supports the following products:

- iBook (Dual USB)
- iBook (Late 2001)
- iBook (Opaque 16 VRAM)
- iBook (32 VRAM)
- iBook (800 MHZ 32 VRAM)
- iBook (900 MHZ 32 VRAM)
- iBook G4 (12-inch)
- PowerBook G4 (12-inch)
- PowerBook G4 (12-inch DVI)
- PowerBook G4 (15-inch FW 800)
- PowerBook G4 (17-inch)
- PowerBook G4 (17-inch 1.33GHz)

The Battery Update enhances the performance of the battery to ensure that full capacity is

available for your PowerBook or iBook.

Power Mac G5 Firmware Update V 5.1.4 2003-12-16

Required

- OS 10.2.7 (G5), 10.2.8 (G5), 10.3

This firmware update provides changes for initializing and running your Power Mac G5. It provides some performance improvements for some PCI-X configurations, patches a security hole and improves fan behavior in Open Firmware.

This firmware update provides changes for initializing and running your Power Mac G5. It provides some performance improvements for some PCI-X configurations, patches a security hole and improves fan behavior in Open Firmware.

AirPort 3.0.4 for Mac OS X 10.2 2003-12-01

Required

- Mac OS X 10.2 or greater
- an AirPort-ready computer with an internal AirPort Card

This update is recommended for all customers with French AirPort Extreme Base Stations or if your AirPort Extreme Base

Station stops responding after being on a busy Ethernet Network.

Apple has posted the AirPort Extreme Firmware Update 5.0.4 that is included in this update. This new firmware prevents the AirPort Extreme Base Stations from being downgraded, and reduces performance degradation when connected to high traffic LAN networks.

AirPort 3.0.4 for Mac OS X 10.1.5

2003-12-01

Required

- Mac OS X 10.1.5 plus Networking Update
- an AirPort-ready computer with an internal AirPort Card

This update is recommended for all customers with French AirPort Extreme Base Stations or if your AirPort Extreme Base Station stops responding after being on a busy Ethernet Network.

Apple has posted the AirPort Extreme Firmware Update 5.0.4 that is included in this update. This new firmware prevents the AirPort Extreme Base Stations from being downgraded, and reduces performance degradation when connected to high traffic LAN networks. ☒

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Keystone MacCentral meetings are held at 6:30 p.m. on the 3rd Tuesday of the month at Gannett Fleming, 209 Senate Avenue, Camp Hill.

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FIRST CLASS

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ACD/Deneba's Curtis Christensen Will Demonstrate the Graphics Program Canvas 9



This will be a first for the club:
Curtis will be demo-ing Canvas
from his home in Florida
via phone and internet.



Gannett Fleming

Gannett West Building
209 Senate Avenue • Camp Hill

Tuesday, January 20, 2004, 6:30 p.m.

Attendance is free and open to all interested persons.