Macaholics UNANIMOUS

The Official Newsletter of the Upper Keys Macintosh Users Group



Apple User Grou November 2013 Volume 21 Issue 12

More Than One Way to Scan the Cat



by Sue Beal

JIM SPENCER, dive and photo enthusiast, and long-time UKMUG member, prepared a wonderful and comprehensive lecture-demonstration for us on scanning.

Careful to say he wasn't an expert, Jim went on to introduce us to techniques for bringing images into our digital world, some of which we'd never even heard of previously! He said he likes to work outside the box, and that was a large part of the fun for us!

Thank you, Jim, for a well researched, well presented and very interesting evening!

Jim Spencer started by defining scanning as "the bridge between two worlds." Converting static, two-dimensional images into digital files that can be used in the dynamic display world of computer, TV, and movies. It's going from the old world into the new.

Images are very important in the communication of information, they've become the standard. Visually, we instantly recognize images, and we make decisions based on that recognition. Images have a powerful impact on our lives.

Scanners work by transforming light into an electrical signal which can then be digitized, recorded and displayed as pixels. Think of each pixel as a point of light that has a specific value and hue. Light might be bounced off an image, which is called a reflective scan, or shone through an image, in a transparent scan.

Different Types of Scanners, an Evolution

Next flatbed scanners were developed, becoming commercially available in the 1980s. (I remember pay-

Jim was accompanied by his cat, Pernicious, who provided sound effects.

OUR NEXT MEETING:

Thursday, Nov. 14, 2013

7pm at Key Largo Library Community Room MM 101.4 Oceanside

iOS7 and All That Jazz!

Get the scoop on the new iOS7 and other new developments with Jack Buccellato and Chris Muller from All Keys ComputerGuys



Beginners: Come at 6:30 and bring your Mac and your questions. There will be some experienced users there to help for the half-hour before the formal presentation starts! Experienced users: please come and help!

About UKMUG

UKMUG meets at the Key Largo Library Community Room on the second Thursday of each month. Speakers begin at 7pm. and may go as late as 9pm.

Are you a beginner needing Mac help? Come at 6:30 and bring your Mac and your questions. There will be some experienced users there to help for the half-hour before the formal presentation starts.

Voluntary annual dues are collected in Jan-Feb-Mar: \$25.

continued on page two

continued from page one

ing \$1500 for a 300 dpi Apple flatbed in the late 80s.) Flatbed scanners use CCD (charge-coupled device) technology to record the information. Jim says you can approach drum scan quality with a flatbed, and that you can use many flatbeds for both reflective and slide/transparency/negative scanning.

Nowadays we have lots of types of scanners to choose from. Along with the flatbeds, we have sheet-fed, book scanners, large format, handheld... and then alternatives like using your digital camera or iPhone to scan things. And Jim showed us even more...

A dedicated CCD-based film scanner will scan transparencies and negatives. This is older technology and many brands can no longer be purchased new. But they are still around if you're in the market.

A slide duplicator coupled with a DSLR camera is one of the more unusual methods Jim showed us. (See picture at the right.) With this rig, you can duplicate 35mm slides very quickly, with very good results. Your output can be RAW files, which contain more information than JPGs or even TIFs. Jim says there are also setups similar to this available for film in strips or reels.

And finally, here's a simple, quick and dirty" way to get slides digitized: project them onto a screen or even onto a big piece of white paper taped to a wall (!), and rephotograph the projected image to capture it on your DSLR camera.

Scanning Software

Every scanner comes with scanner driver software, which is an interface allowing your computer to interact with the device. The interface allows you to make image adjustments even before you scan the image, allowing you to capture maximum quality from the beginning (as opposed to having a lot of post-scan fixing to do). Fixing an image post scan often results in a loss of data, so if you can do it before you do the scan, you're getting better data recorded.

Because each manufacturer makes their own software, the ease of use and other factors vary, and of course, the interface is different on each device if you have more than one scanner. So, there are some third parties who have made some great scanning software that runs on almost all of the scanners you might have. Not only have they done a great job of giving you sophisticated



DRUM SCANNERS wrap the image on a drum, regardless of its size.



FLATBED SCANNERS produce excellent quality for the price, which starts from \$150.





SHEET FED SCANNERS range from compact personal models like the one on the left, to more complex and heavier-duty models for commercial applications. Prices range from \$50 to \$1500 or more.



HANDHELD SCANNERS require a steady hand! Cost is in the \$60-\$150 range.



SLIDE DUPLICATOR attaches to a digital camera. \$200-\$300, and then, or course, you need a camera.



DIY BOOK SCANNER. Graduate student Daniel Reetz made this book scanner in 3 days, for about \$300. He lashed together two lights, two Canon Powershot A590 cameras, a few pieces of acrylic and some wood. It's fast enough to scan a 400-page book in about 20 minutes. To use it, he simply loads in a book and presses a button, then turns the page and presses the button again. Each press of the button captures two pages, and when he's done, software on Reetz's computer converts the book into a PDF file. The Reetz DIY book scanner isn't automated—you still need to stand by it to turn the pages. But it's fast and inexpensive. His how-to guide is available online.



NIKON COOL SCAN - a dedicated slide scanner. Price ranges up from \$200, hard to find new any more.



LARGE FORMAT SCANNER

continued from page two

"I Hate to Scan:" Alternatives

- You can use a commercial scanning service for high-end scanning.
- For economically digitizing slides, try <u>www.scancafe.com</u>
- CVS offers scanning services.

controls and professional results, but they give the added advantage of you having to learn only one interface. The leading two are SilverFast and VueScan.

Demonstration Portion

After the break, Jim started the demo portion of the evening. By the way, I think he wins the award for most stuff everlugged into UKMUG for a presentation! He had a lot to show us.

His scanning demo covered two reflective methods: flatbed and digital camera; and four transparent methods: flatbed, dedicated film scanner, DSLR camera and slide projector, and slide duplicator.

Websites with good scanning info

- www.kenrockwell.com
- www.silverfast.com
- www.hamrick.com (VueScan)
- www.dpbestflow.org (for digital camera-based scanning)
- www.kelbytraining.com/course/ tally_scanning
- www.luminouslandscape.com (one of Jim's favorites)
- <u>www.scantips.com</u> (very good practical how-to covering DPI, scaling, etc.

Jim Spencer asks: What's the difference between a Cat and a Comma?





"A cat has its claws at the end of its paws and a comma has its pause at the end of its clause!

Books on Scanning

- · Avoiding The Scanning Blues
- Scanning with SilverFast
- SilverFast, the Official Guide all of the above are by Dr. Taz Tally
- VueScan Bible by Sascha Steinhoff

Flatbed - reflective

Jim started with the flatbed scanner, a Canon 8400F, and brought up the Canoscan software that comes with it. You have a choice, with most scan software, of beginner or simple versus advanced mode. Jim went directly to advanced mode; there's much more you can do with it.

You select a source for the scan (platen, in this case), the size, color or black and white, a resolution, and the output size.

Then do a preview. It will bring up a low resolution picture of what's on the platen. You can then look at image settings like unsharp mask, descreening (good for scanning commercially printed materials like books and magazine articles), play with brightness, contrast, gamma, etc. Then do your scan and save the file. (Put it somewhere you can find it!!) Jim recommends the TIF format for preserving the most information.

Rule of Thumb: scan for the maximum size you might want. You can always make a smaller, more email- or web-friendly JPG files from the original large file.

Flatbed - transparent

Next Jim scanned a slide using the flatbed. For this you take out the platen, which is the white "lid" inside the scanner. Some scanners have little holders to put different types of transparencies into. They go emulsion side up, and Jim says to make sure all your scanner wires are tight. (Apparently parts of the scanner are used for transparency scanning that don't need to be working for reflective scanning.)

Jim used SilverFast to show the slide scan. First, the settings. A slide is a color positive. Set resolution and output size. Preview and set the cropping rectangle as

Why do people do desktop scanning?

- Archive and catalog art, slides, photos and other 2 dimensional memorabilia they have collected
- Restore and improve old images and preserve them
- Repurpose images for photo books, framing and other uses
- Make prints
- Email to others
- Display it on the web
- Use it in a presentation

you want it. You can also use the zoom button for better control and visibility. Use the backlight correction to brighten up the slide.

SilverFast uses up to 48-bit color, meaning each channel holds 2^{48} shades of gray, resulting in many millions of colors. That might be a bit too much for most folks. The standard is 8 bit color, and even Photoshop only goes up to 16 bit.

Slide Copier

Jim brought a contraption I'd never seen before, and it was ever so cool! There's a picture of a similar slide copier with digital camera rig on page 2.

This one is easy to set up, and fast to use for a big pile of slides. The quality might not be as good as a dedicated slide scanner, but it does a decent job.

You just put a slide in, check the focus, (you'll need an external light source) and hit the shutter. Repeat.

Projector and DSLR Camera

Jim used a carousel projector to project an image onto a portable screen, then snapped

a picture of that with his camera. It was surprising to see how well that worked! If you have a camera already, this is the cheapest method; you can get a carousel projector and screen (or rig up some white paper) for next to nothing.

THANK YOU, JIM... for a most illuminating evening!



Here are the four methods, side by side for comparison: We felt the dedicated slide scanner produced the best image and the Canoscan flatbed was second.



More Scanning Tips

Some folks emailed in tips and comments after the meeting:

Graham Thomas wrote: Don't forget the 3-1 printers (we have 3 of them, all different brands, Canon, HP and Epson) which have built-in scanners as does our fax machine. (Also known as MFPs (multi-function printers), these rank poorly for scanning in the big scheme of things. But they are great for documents and other light scanning, and super for saving space in your office.)

Jim Spencer: Make sure the glass on your flatbed is clean. Use Windex, alcohol or screen cleaner.

And my personal favorite: if you're scanning something like a magazine or newspaper that has writing on the back, put a piece of black paper on top of it in the scanner bed (meaning, behind it, from the scanner's point of view.) It darkens it, but it gets the ghosting of the back print off the background of the scan.



The digital world is is color blind!

By "color blind", I don't mean it has a little trouble distinguishing between certain shades of green and purple. I mean it's completely and totally blind when it comes to color. Jim told us that all it sees is black and white, and shades of gray in between. The crowd was stunned! If it doesn't see color, how is it doing such a great job of showing us something it doesn't see?

Color modes and color channels. They're closely related, so once you understand the first one, color modes, then color channels make a lot more sense.

There are two main color modes out there, RGB and CMYK. The CMYK mode deals with printing and the letters stand for Cyan, Magenta, Yellow and Black, the 4 colors of ink. That's a topic for another day. So let's look at "RGB".

By far the most widely used color mode in the digital world is RGB. Photoshop uses it, other programs on your computer use it, your computer monitor uses it, so does your digital camera and scanner, your television, even the little screen on your cellphone or iPod uses it. RGB stands for the names of three primary colors of light: Red, Green and Blue.

Every color we can see is made up of some combination of red, green and blue. How do we get yellow? By mixing red and green. How do we get pink? By mixing red and blue. Every single color that we can see is made up of some combination of these three colors.

When you mix fully saturated versions of all three colors together, you get pure white. When you remove all three colors completely, you get pure black.

How does it know how much RGB to mix together for each color on the screen when it doesn't see colors to begin with?

All it knows is "display red at 255, green at 255, and blue at 0 in that specific pixel." Whatever color that ends up being when we view it doesn't matter to the computer. So how does it know how much of each color to use? Color channels.

What we see as one full color image, the computer sees as three separate grayscale images. Each one of those images represents a color channel, one each for red, green and blue. Three separate channels for three separate colors, all coming together to create a full color image. Color for the viewer is created by the output device, such as a computer screen, inkjet or color laser print, digital projector, etc.

Think of color "channels" as color "filters." Whenever you see a color image on the screen, it knows which colors to display by shining a light through the filters. First



The original full color image.



Red channel.



Green channel.



Blue channel.

it shines the light through the red filter (the red channel). If no amount of light passes through the filter, there's no color. If all of the light passes through the filter, the color is full strength. And of course, there are shades in between.

It does this for every single pixel in your image, so if your image contains millions of pixels, as most photos from digital cameras these days do, it goes through this process millions of times just to display the image you see on your screen.

With thanks to http://www.photoshopessentials.com/essentials/rgb/

OCR: The most important scanning feature you never knew you needed

taken from an article trying to sell an HP scanner!



Optical character recognition (OCR) software works with your scanner to convert printed characters into digital text, allowing you to search for or edit your document in a word processing or other program.

Benefits of OCR

Easily search files scanned with OCR using key words and phrases.

Once you've scanned your document using OCR, edit the text within a word processing or other program of your choice.

Save space by keeping important information on a CD instead of in a bulky filing cabinet.

No more retyping! If you lose or accidentally erase an important digital file, such as a proposal or invoice, but still have a hard copy, you can easily replace it in your digital filing system by using OCR software to scan the paper original or most recent printed draft.

Capture text from articles, letters and books and bring it into programs for editing.

Quick digital searches

OCR software converts scanned text into a word processing file, giving you the opportunity to search for specific documents using a keyword or phrase. For example, you could effortlessly search hundreds of invoices and locate a specific name or account in moments, without having to thumb through extensive files.

Edit text

Once you've scanned your document using OCR, you have the option to edit the

text within a word processing program of your choice. Scan items that may need to be updated in the future to help expedite the editing process.

Save space

Free up storage space by scanning paper documents and hauling the originals off to storage or the trash. You can easily turn a filing cabinet worth of information into editable digital files, and create a backup system consisting of a single CD.

Accessibility

OCR software is a useful Accessibility or Ease of Access tool. Vision impaired users can scan books, magazines, incoming faxes, or other documents into word processing programs to be used in conjunction with a computer voice-over utility.

Where do I get it?

Many scanners come with a limited OCR package built in. *If yours does not, try ABBYY FineReader, for about \$99.*—Sue

There's an App for That!



Genius Scan - PDF Scanner, by The Grizzly Labs

Genius Scan turns your iPhone into a pocket scanner. It enables you to

quickly scan documents on the go and email the scans as JPEG or PDF. \$2.99 from the App Store.



Jeanne Kavanaugh, Elise Henline, Amber Goldstein & Penny Smith



Alan & Carol Ackenhausen



Gloria Avner, David Gitin & Linda Perloff



Now that's working the Beginner's Circle! Monica Gorenson, Harriette Mattson, Christine Latronico and Mary Anne Roper

Resolution explained (pixels, DPI, inches)

from http://www.pptxtreme.com/help/psdimport/ResolutionExplainedPixelsDPIInches.html

When dealing with graphics files there are three properties that go into determining the resolution of a file.

Pixels: The exact number of 'dots' both horizontally and vertically that make up the file. This is the actual resolution of the file. DPI and Inches affect only the size of the image as it is displayed or printed, but the actual pixels is finite in a bitmapped file.

DPI (Dots Per Inch): The number of 'dots' or pixels per each inch of a printed or scanned document.

Inches: The actual size (either printed or scanned) of an image.

These three parameters have a direct relationship with one another. With any two of the parameters known, a simple mathematical formula will give you the third. For example: An image created in Photoshop at 300 x 300 (that's 300 pixels wide by 300 pixels high) with a DPI of 100 is exactly 3" x 3".

Inches = Pixels/DPI, so 3 = 300/100

If you look at the Image Size in Photoshop you can see how these relate.

Image Size	
Pixel Dimensions: 1.55M	
Width: 1000	pixels 🗘 🗇
Height: 542	pixels 🗘 🕽 🖁
Document Size:	
Width: 10	inches 🗘 🕽 🖪
Height: 5.42	inches 🗘 🗸 🖽
Resolution: 100	pixels/inch 💠

In Dr. Taz Tally's book, *Silverfast - The Official Guide* he makes a point that the terminology is not always used consistently in the graphics arts field and software applications. Jim prefers how he explains it, so if you're curious, look it up.

There are 10 types of people in the world. Those that understand binary and those who don't.

Thanks to Jerry King, President, Naples MUG for reminding us of this!

DPI = Resolution: A common mistake

Many people think DPI is all that matters. They couldn't be more wrong! A person creating graphics for print often says "I need it at 300 DPI." That really doesn't tell us much. For example, if I am scanning something for that person that is 2" x 2" and I scan at 300 DPI, I will get an image that is 600 x 600 pixels. If my original was 8" x 10", I will get a result of 2400 x 3000 pixels. That is quite a difference in both resolution and file size.

What else is missing here? Well, it doesn't really matter what the original size of the image is (in inches), what matters is what the size of the output will be. So if the person asking for 300 DPI also added that this image (when printed) will be 2" by 2", then we can do the math! We know that they want a final resolution of 600 x 600 pixels! We can do the math when we scan based on the size of the original, or scan at a high enough resolution and resize it in Photoshop (or any graphics program).

Keep in mind too, that if the image will be cropped, the size of the cropped area is what you should use for your calculations. There's no point in sending a picture of 10 people sized for a 2"x2" headshot if only one person's head will be used. Make sure the head, or the part of the image, you need is the size you need.

Quick iPhone Tip

Sent in by Graham Thomas

Lost your iPhone at home and it's on vibrate? (You must have Find iPhone installed.)

Go to www.iCloud.com. Log-in using your Apple account >> Find My iPhone >> Play Sound. *Ta-dah!*



23 Things to do to Improve Battery Life in iOS 7

From ZDNet

http://www.ugnn.com/2013/09/23-things-to-do-to-improve-battery-life-in-ios-7/

Quick iPhone/iPad Tip:

Al Weisberg shared his tip for keeping his iPad mini screen clean: use a micro-fiber wipe. Works great!

The Apple Store in Key West has been purchased by Small Dog Electronics. Karen has reached out to them to become involved with our club, and we just might meet some of the staff at our January meeting! Stay tuned! —Sue



Turn off Parallax

The new theme includes the Parallax Effect for the wallpapers, which is a pseudo 3D effect that attempts to match the motion of the screen (wallpaper and icons) with the movement of the device. If you don't like this effect, or if it seems to be draining your battery faster than usual, you can turn it off. Here's how:

- 1. Go to Settings | General
- 2. Tap Accessibility | Reduce Motion
- 3. Tap Reduce Motion to set it to On

Though the difference is subtle to the eye, it may improve your battery life significantly.

Block unwanted callers and messages

That's right! You can now block unwanted callers and messages. The only caveat is that the sender must be in your contacts. So, if there's someone calling or messaging you that you don't want to hear from, first add them in your contacts. Once you've done that, do the following:

- 1. Tap Settings | Messages | Blocked
- 2. From the Contacts listing, select the contact you want to block
- 3. If that contact has multiple numbers, you'll need to add them again

Any call or message from that sender will now be blocked.

Turn on Wi-Fi/Bluetooth with Siri

Siri can now do more than ever. Launch Siri and then say "Turn Wi-Fi on" or "Turn Wi-Fi off." You'll be surprised that Siri complies. This holds true for Bluetooth and other system toggles.

Swipe gesture to go back

For the longest time, to get back one screen, you had to tap the upper left corner of the home screen (a sort of "back" button). Now, with iOS 7, you can swipe the screen to the

right and go back. This is very helpful when you're deep within the configuration options.

Auto refresh in the background

With iOS 7, you can set specific apps to auto refresh their data without having to re-open them. This feature takes a toll on your battery, but for frequently-used apps, it can come in handy. Here's how to use it:

- 1. Tap Settings | General
- 2. Tap Background App Refresh
- 3. Locate the app you want to allow auto refresh
- 4. Slide the on/off switch to the on position for that app

Now, you won't have to close and open that particular app to have its data refreshed.

Turn on or off application auto-update

iOS 7 also brings to life the ability to autoupdate the applications on your phone. This happens in the background and will save you the time and hassle of opening the App Store and running the updates from there. To enable this feature, do the following:

- 1. Tap Settings | iTunes & App Store
- 2. Scroll down to Automatic Downloads
- 3. Enable Updates by sliding the associated slider to the right

Disable advertising tracking

This is great for anyone who prefers a bit more anonymity on their mobile device. You can prevent iAds from using your location to help specify the type of ads you receive. To make sure you aren't targeted, you need to enable Limit Ad Tracking:

- 1. Go to Settings | Privacy | Advertising
- 2. Slide the slider to the right to turn on Limit Ad Tracking

You can also tap Reset Advertising Identifier (after you've enabled Limit Ad Tracking) for even more privacy. You'll still get ads, but those ads won't be location-specific.



The ultimate tribute to Apple innovation & design

submitted by Jerry Gaddis, from http://online.wsj.com/article/SB100014240527023
03464504579107543820263888.html

People who buy Apple products are among the most fanatical consumers in the world. (After all, consumers don't camp out for days to buy new cars or clothes.) So it isn't surprising that one fan set out to erect a photographic shrine to every single Apple product ever created, from the Apple I computer in 1976 to the iPad mini.

Four years ago, Jonathan Zufi, a 42-year-old Australian native, began buying up more than 500 products: desktops, Apple's first commercial printer and iPods—some in vintage packaging.

He rented a storage unit to hold all the goods. He built a studio in the basement of his Atlanta home to photograph them, placing each item carefully against the same type of futuristic white backdrop used on apple.com and in Apple stores. He got a photography professor to help him learn to take professional shots.

"I wanted to create a repository where people who also love the company and its products could go and reminisce," says Mr. Zufi, a mobility expert at SAP America Inc. who says he has never worked for Apple Inc. The idea, he says, was to trace the company's evolution both in electronics and design from a user's point of view. "I want people who are a bit younger who think Apple just makes things that start with "i" to know this company used to make clunky printers."

The result is a collection of more than 150,000 photos, some 3,500 of which Mr. Zufi displays on a website (www.shrineofapple.com) and more than 650 of which he has curated into a new 326-page coffee-table-sized book. "Iconic: A Photographic Tribute to Apple Innovation," is self-published and available at www.iconicbook.com.









Color Copies • Large or Small Orders

Rack Cards • Business Forms & Checks • Brochures
Business Cards • Letterhead • Envelopes
Signs and Banners • Multi-Part Forms • RX pads
Posters • Rubber Stamps • Graphic Design

305-664-1002

81933 Overseas Hwy., Islamorada printsourcekeys@yahoo.com

MU Classifieds

Got Stuff for Sale or Giveaway?
Need Something?

Email ukmug@bellsouth.net and I'll post it here.



Come at 6:30 for the Beginners Circle:

Bring your laptop and your questions at 6:30, and for a half-hour prior to the main meeting we'll have experienced folks available to help, one on one, or in small groups.



Tom Stack & Associates, Inc. 154 Tequesta St. Tavernier, FL 33070 305-852-5520 www.tomstackphoto.com

We are pleased to announce our New Epson 9880 44" Printer with Vivid Magenta Technology. For all UKMUG Members we offer 20% off Printing Prices. We also offer photo restoration, as well as Stock Photograpy for your web site.



"No, you weren't downloaded. You were born!" Thanks, Elise!

VISIT TODAY! http://ukmug.pbworks.com/

Did you see that picture of you, taken at the last meeting?

http://ukmug.pbworks.com/

VISIT TODAY!

http://ukmug.pbworks.com/

Post questions and requests for help
Post tips and tricks
Post your favorite links
Check on upcoming meetings
Download our newsletters & more!

A little boy goes to his father and asks 'Daddy, how was I born?'

The father answers, 'Well, son, I guess one day you will need to find out anyway... Your Mom and I first got together in a chat room on Yahoo. Then I set up a date via e-mail with your Mom and we met at a cyber-cafe. We sneaked into a secluded room, and Googled each other. There your mother agreed to a download from my hard drive. As soon as I was ready to upload, we discovered that neither one of us had used a firewall, and since it was too late to hit the delete button, nine months later a little Pop-Up appeared that said:

'You've got Male!'

Thanks to Elise Henline for the funnies.



Monroe County Recycling Collection Center: MM 100.1 Oceanside (Magnolia St.) 453-0788

E-RECYCLING: 2nd & 4th Wed. every month, 10am - 2pm

E-waste: Monitors & Computers Batteries, Televisions, All Telephones & FAX Machines, Printers / Copiers, DVD / VCR Players, Radios & Speakers, Discs & Cassettes Also taking Hazardous Household Waste.

<u>Macaholics</u> <u>UNANIMOUS</u>

is the official newsletter of the

Upper Keys Mac Users Group

A nonprofit organization devoted to the use (and sometimes abuse) of the Macintosh computer. Subscriptions are \$25.00 for one year. Contents © 1993 - 2013 by the Upper Keys Macintosh Users Group except where noted. All other rights reserved.

219 Second St. • Key Largo FL 33037 (305) 451-4601 • ukmug@bellsouth.net

Share! Send us your stuff!

