The P U L P
Newsletter of the Hartford User Group Exchange

http://www.huge.org   Volume 34 Issue 9

September 15th General Meeting:

Pat's Choice

Knights of Columbus 2533 Main Street, Glastonbury, CT

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Q&A Session: 7 PM–7:30PM
Meeting starts at: 7:30PM

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MEETING LOCATIONS

East Hartford Public Library
Main & Central Avenue
in the Lion's Community Room
Downstairs

Knights of Columbus
2533 Main Street
Glastonbury, CT

From The Editor

by Stuart Rabinowitz

I started the upgrade of my MacBook with the install of a new 750 GB Hard drive (opted for storage vs. speed), a fresh install of Yosemite and a migration of all my Snow Leopard stuff. I then went through the process of deleting the non-compliant apps. Took the better part of a day. Now you have to bear with me as I get used to Pages after 30 years with AppleWorks/ClarisWorks/AppleWorks.

I have noticed that my system seems to be a bit faster (installed a 7200 vs. 54000 RPM drive) and my battery seems to be lasting a bit longer.

Pat will be leading the Sept. Meeting, which may be our last in Glastonbury. There are hints that the East Hartford Library will finally reopen. Scheduled 9/8/2015.

In the news: Pencil in Sept. 9 for new iPhones. MacKeeper customers can file a claim to get their money back. iTunes is now basically illegal in the UK, because it makes digital copies.

Microsoft issued the first update about a week after Windows 10 was released. BTW, there are a number of privacy & security concerns noted by various computer experts/columnists/bloggers. The Windows 10 search bar phones home to Microsoft, even with Bing disabled.

Chrysler has recalled 1.4M cars that were vulnerable to remote hacking. Researchers have demo'd texting a Corvette could turn on the brakes and stop it in its tracks. Others have shown the ability to locate, unlock and re-mote start GM vehicles. Still others have hacked electric skateboards and could send riders flying.

A federal appeals court in Ohio rules that 'pocket-dialed' calls aren't private.

There is a new malware that can turn your computer into a cellular antenna.

There is some new 3D XPoint memory that could last forever. Samsung has unveiled a 15TB SSD based on densest flash memory. It may be released next year. Pricing not yet available.

Boeing has developed and tested a laser that hunts for drones and shoots them down,

Some recent research suggests that -- Rain could make your solar panels dirtier, not cleaner. It accumulates in the corners, mucking up the works.

Send your comments to editor@huge.org
Until next month…Happy computing!!

Stuart Rabinowitz, Editor

Here is the appropriate copyright citation and a link to the full text. articles from "Tidbits"

http://creativecommons.org/licenses/by-nc-nd/3.0/

A Little Computer Quiz

1 Awards are used to honor people for their accomplishments, but sometimes there are unusual honors bestowed. Can you name 2 individuals in the tech field that have had flies (as in house or tsetse) named after them?

2 John Carmack, co-founded id Software & created Wolfenstein 3D, Doom & Quake, has won an Emmy. For what?

3 One of the longest lived computers was the Whirlwind. It was started in 1944 and began operating in 1951. When was it finally retired and turned off?

4 In addition to its long life it had one significant first for computer history, what was that?

5 What was Whirlwind used for?

June Quiz Answers

1 By now most of us have a cell phone, but do you remember when was the first call was made?

  A In April, 1973 Martin Cooper used a prototype.

2 When did the cell phone first hit the market?

  A Motorola received FCC approval in Sept. 1983 and began selling in 1984.

3 What company manufactured that first cell phone and what was it called?

  A Motorola DynaTAC (Dynamic Adaptive Total Area Coverage.) 8000X

4 How much did it cost?
  A $3,995

5 What was the official mascot of Apple's Developer Technical Support? (Hint: it was a bitmap glyph (z) in the Cairo font)

  A Clarus, the dogcow.

11 Stupid Backup Strategies
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by Joe Kissell: <jk@alt.cc>, @joekissell
article link: <http://tidbits.com/e/15746>
18 comments

Last month when Adam, Tonya, and I attended the ASMC (Apple Specialists Marketing Corporation) Spring Conference in San Francisco, one of the special activities was a field trip to the DriveSavers headquarters in Novato. DriveSavers is a data recovery company — they're the ones you call when you lose critical data from a hard drive or SSD and don't have a backup. They can disassemble your drive in a clean room, perform the electronic equivalent of brain surgery on it, and in most cases, recover your crucial missing data. (For more on DriveSavers, read Jeff Carlson's article "DriveSavers to the Rescue," 30 August 1999.) Needless to say, these recovery services come at a cost, but in truly critical situations, you can't put a price on this sort of magic.

<http://events.applespecialist.com/>
<http://www.drivesaversdatarecovery.com/>
<http://tidbits.com/article/5530>

The DriveSavers facility was a geek paradise. The only time I've seen anything close to that amount of high-tech gear in one place was when I visited CERN's Large Hadron Collider in Geneva. I loved learning about every part of the data recovery process. From a technical point of view, it was utterly fascinating. It was also eye-opening to hear about some of the high-profile customers DriveSavers had helped. The walls were covered with autographed photos of celebrities for whom the company had recovered data (including, somewhat ironically, Brent Spiner, who played Data on "Star Trek: The Next Generation").

<https://en.wikipedia.org/wiki/Large_Hadron_Collider>
<https://en.wikipedia.org/wiki/Data_(Star_Trek)>

All throughout the tour, I had two conflicting feelings. One was: "Wow, it would be so cool to work here!" The other was: "My mission is to put them out of business!"

I say this, of course, not out of any malice toward the fine folks at DriveSavers, but because I've been beating the backups drum for years, and if everyone had adequate backups, one of the main reasons for DriveSavers' existence would disappear. (The company would be fine, in fact, because they also do lots of work for law enforcement and government agencies, and deal with plenty of situations in which backups wouldn't have been a factor.)

In my new book, "Backing Up Your Mac: A Joe On Tech Guide," I lay out a backup strategy that aims to be, shall we say, highly bullet-resistant. There are no guarantees when it comes to computers, and as Robert Heinlein once said, "It is impossible to make anything foolproof, because fools are so ingenious." That qualification aside, the system I use personally and explain in my book offers Mac users a simple way to achieve peace of mind. As I often say, even if a meteorite destroyed my house and all my equipment (while I wasn't at home, obviously), I have 100 percent confidence that I would lose absolutely no important data. (Nuclear war, a zombie apocalypse, or an asteroid strike might be too much, but then I'd have bigger things to worry about anyway.)

<http://www.takecontrolbooks.com/jot-backing-up>

As I talk to people about my book, I frequently hear responses along the lines of, "Well, here's what I do to back up my Mac. What do you think of my system?" More often than not, I don't say what I think, which is "Wow, that is one of the stupidest strategies I've ever heard of."

The fact that your backup strategy is stupid does not imply that _you_ are stupid. It only means you may not have given careful thought to what disasters could harm your data (theft, fire, hurricane, malware, software bugs, user error, and so on) or exactly what steps you would take if something did go wrong. I don't want you to have stupid backups; I want you to have such excellent backups that you're justifiably confident of being able to recover from any sort of data loss. In that spirit, here are 10 — wait, make

that 11! — stupid backup strategies I urge you to avoid.

1. Having no backups at all. -- According to a recent post on the Backblaze blog, an annual survey found that only 8 percent of respondents back up their computers every day (a figure that, worryingly, has dropped over the past couple of years), whereas 16 percent back up less frequently than once a year, and 25 percent never back up at all.

<https://www.backblaze.com/blog/backup-awareness-month-2015/>

Doing nothing is of course the worst way to approach backups. You're trusting that everything will work perfectly no matter what you do (or what someone else does), and that's too much to ask of a computer. You will lose data at some point. Something is _always_ better than nothing when it comes to backups.

2. Depending on data recovery apps or services. -- If you accidentally delete a file on your Mac, you _might_ be able to undelete it using any of numerous data recovery apps. If that fails (as it would if the drive is electronically or mechanically damaged), a company like DriveSavers may be able to rescue your data. But assuming you'll be able to use one of these approaches if disaster occurs is unwise. Sometimes they fail, and if the cause of data loss is theft (or, you know, a meteorite that pulverized your Mac), there's no disk to work with anyway.

This might be an appropriate time to mention that if you work for a company that makes data recovery software, you can stop pitching me about reviewing it. I'm all about prevention, and I think my readers' money is far better spent on backups than on recovery tools.

3. Wishful thinking. -- A couple of weeks ago, a novelist acquaintance of mine complained on Facebook about having lost three scenes from a novel revision because she accidentally deleted the document. A friend helpfully suggested that, since she's a Mac user, she could retrieve the document using Time Machine. But no, she replied, she _never actu-

ally saved or even named the document_, so there was nothing for Time Machine to back up.

Head. Desk.

It's true that some apps autosave your work, giving you a way to pick up where you left off even if you never name a new document. (BBEdit, which I'm using to write this article, is one such app.) But not all apps function this way, and even when they do, there are ways in which users might accidentally delete the autosaved files. Pretty much all backup systems assume users will take at least the basic, obvious step of naming their files and saving them once (after which regular autosaves often kick in, storing additional versions automatically).

4. Doing manual backups. -- I know people who back up their Macs (or at least, a subset of their files) occasionally — whenever it occurs to them — either by making a clone or by manually copying files to another drive. Well, as I said, something is better than nothing, but in my experience, the day you forget to back up something manually (or run out of time) is the day you lose data. Having backups run automatically is a far superior idea.

5. Using _only_ Time Machine. -- I think it's fantastic that Time Machine exists, and is built into OS X. Apple was absolutely right to make backups as simple and convenient as possible (not to mention free). And, to be sure, using Time Machine is _way_ better than nothing at all.

But I've had too many troubling experiences with Time Machine (and have heard about countless more) to rely on it as my sole backup software. For example, as I wrote in my Joe On Tech article Why I Don't Rely on Time Machine, in the last month my wife and I both encountered unrecoverable Time Machine errors that required us to erase our backup drives and start over from scratch. The disks themselves were fine, but the backup data wasn't, and not even fancy disk-repair software could fix the problem. Time Machine might function perfectly for years, only to choke randomly like this. So although Time Machine is convenient (and totally fine as an additional backup), I wouldn't feel comfortable using or recommending it exclusively.

<http://joeontech.net/why-i-dont-rely-on-time-machine.html>

There's another downside about Time Machine, too, which is that if your entire disk dies, your only option is to reformat or replace the disk and then restore the whole thing from your backup — a process that can take many, many hours. During that time, you won't be able to use your Mac for anything else, which is why I strongly recommend a bootable duplicate (or "clone") as part of your backup plan. But that brings me to the next problem...

6. Using _only_ clones for backup. -- Clones are great. They let you get back to work almost instantly if anything goes wrong (just reboot while holding down Option and select the clone). They also give you a way to downgrade to your previous version of OS X, should anything go wrong when upgrading to a new version. (By the way, if you're not giving your clones names like Sarah, Alison, Cosima, and Helena, you're Doing It Wrong.)

<https://en.wikipedia.org/wiki/Orphan_Black>

One problem with using only clones for backup is that they don't necessarily give you a way to retrieve accidentally deleted files, or earlier versions of files, if you discover you need them only after updating your clone. (Some cloning software does let you archive such items, but you have to know what you're doing.) Another problem is that if your clone is stored with your Mac, then anything that happens to the Mac (tornado, burglar, etc.) can also take out your only backup. This, in turn, leads us to...

7. Having no offsite backups. -- You know that metaphorical meteorite I keep going on about? It might take out my house in California, but it almost certainly won't _also_ take out CrashPlan's data center in Minnesota, or any of several other places I store my data. Same goes for data loss due to thieves, burst pipes, or a fire, all of which are far more likely than meteorites. If your only backups are stored locally, your data is protected against only a limited subset of dangers. You can address this by making extra backups that you store at a friend's house, in a safe deposit box, or another safe location; or you can

use a cloud service such as CrashPlan, Backblaze, or DollyDrive. But however you do it, make sure you have an offsite copy of your data.

<https://www.code42.com/crashplan/>
<https://www.backblaze.com/>
<http://www.dollydrive.com/>

However, the reverse is also true...

8. Having _only_ online backups. -- Online backups are great for many things, but if you should ever have to restore more than a few gigabytes from online storage (let alone an entire disk), you'll be in for a long wait, because you'll be constrained by your Internet provider's bandwidth. You may also run into data caps that prevent you from downloading all your backed-up data in a single month. Faced with such a problem, you might be able to pay the backup provider to send your data on a hard drive. But while you're waiting for your data to download (or for the FedEx truck to arrive), you won't have access to your data. Personally, I'd have a real problem with all that downtime, which is why local backups are part of the mix for me. (Of course, if you want to boot from a clone, it must be on a local hard drive.)

The next two stupid strategies are also related to online backups.

9. Relying solely on Dropbox (or similar services). -- Dropbox is wonderful; I use it every day to store files in the cloud and sync them across my devices. Many other cloud storage services (such as iCloud Drive, Box, Amazon Cloud Drive, Google Drive, and Microsoft OneDrive) offer roughly comparable features. And most of these even offer a limited, primitive, backup-like feature: the capability to restore older versions of files or deleted files — at least if they're less than a month old.

That's all good, and in fact, using a service like Dropbox can make data restoration quicker and easier in some situations. But because you can't count on these services to store _all_ the data on your Mac, to keep it indefinitely, or to make it easy to recover a lot of data at once, they're no substitute for proper backups.

10. Assuming Web apps don't need backups. --
Do you use Google Docs, Office 365, iWork for
iCloud, or any of a zillion other such Web apps to
create and collaborate on documents? Most of us do,
at least occasionally. Fine, but do you _also_ have a
local copy of those documents? I'll bet you don't, and
that's a bad idea.

It's not hard to find stories about people who
opened Google Docs (or whatever) one day to find
that a crucial document had vanished, for no appar-
ent reason, and with no apparent recourse. These
sorts of things don't happen often, but they do hap-
pen. You can't assume a cloud service will back up
your data adequately — or that you'll be able to re-
cover it yourself, even if it was backed up. (And, even
if the data is _there_, an Internet outage or server
problem could prevent you from accessing it at a
crucial moment.) Word to the wise: make your own
backups of documents created in the cloud or use a
specialized utility like CloudPull (see "Back Up Your
Google Data with CloudPull," 6 March 2012).

<http://www.goldenhillsoftware.com/cloudpull/>
<http://tidbits.com/article/12840>

11. Thinking of RAID as a backup. -- A reader
suggested this addition after I posted my original list,
and I couldn't agree more. In fact, I discuss this ex-
plicitly in my book. A RAID uses multiple hard
drives to function as a single logical volume. Among
the many ways a RAID can be configured, _mir-
rored_ RAIDs (RAID 1) are most often confused
with backups, because they write every block to two
different physical disks, providing 100 percent re-
dundancy. (RAID 5 and 6 also provide redundancy,
but in a different way.) Well, isn't that basically the
same as a clone, only better, since it's always up to
date?

No. Indeed, the fact that it's always up to date is
part of the problem. If you accidentally delete a file,
for example, it's deleted instantly on both drives in
your mirrored RAID. If you have directory damage,
file corruption, malware, or any of numerous other
problems, it affects both drives equally. And, of
course, if the RAID is stolen or damaged, it doesn't
help at all. The only thing a mirrored RAID protects
you against is the hardware failure of a single drive.

Fair enough; that happens. But it's not the same
thing as a backup.

Don't have stupid backups! I hope you've spent
this entire article rolling your eyes at these ridiculous
excuses for a backup strategy, all the while reminding
yourself that your own backup strategy is _smart_
and doesn't suffer from any of these defects. If so,
then I'm glad you've enjoyed this entertaining look at
how the other 92 percent live.

However, if by any chance you found yourself winc-
ing now and then because you recognized something
in this list that you yourself do, don't feel ashamed.
It's OK; we've all been there. Just don't stay there.
Pick up a copy of "Backing Up Your Mac: A Joe On
Tech Guide" and learn how to educate your backups.
Then you and I can both have that meteorites-won't-
destroy-my-data confidence, and we can turn our
attention to more pressing tasks, like protecting our-
selves from zombies.

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How to Throttle iCloud Photo
Library Uploads
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 by Adam C. Engst: <ace@tidbits.com>,
@adamengst
 article link:
<http://tidbits.com/e/15679>
 8 comments

In networking terms, "throttle" means to control the flow of data. But the more colloquial use of the word is also entirely appropriate when it comes to how Photos for Mac performs uploads to iCloud Photo Library. Apple's new service for centralizing your photo library in iCloud has caused untold frustration with how it can monopolize your Internet connection, transferring photos to iCloud as fast as it can to the detriment of all other network traffic (see "iCloud Photo Library: The Missing FAQ," 15 April 2015). This may not affect everyone, but it's certainly widespread.

<http://tidbits.com/article/15584>

My Internet connection runs at 30 Mbps down and 5 Mbps up, and when I turned on iCloud Photo Library for the first time, Photos completely destroyed Internet performance for every device in the house: Web pages loaded slowly, Google Hangouts struggled, Netflix buffered repeatedly, Rdio stuttered, and even Dark Sky on the iPhone timed out getting climate data. I had to promise to pause syncing whenever Tristan needed to do homework (which is whenever he's home, it seems), and it was clearly something that couldn't run during our work days.

Happily, our old friend Will Mayall (Remember Emailer and LetterRip? That's Will.) came up with a solution that at least some people will be able to avail themselves of. Given how long it will take to upload a decent-sized photo library, you could be doing that every morning and night for days or weeks. (And no, I have no idea what Photos thinks is happening when it says "Adding X items" after you click Resume; it goes back to uploading shortly thereafter.)

<https://mayallit.wordpress.com/2015/04/23/how-to-fix-apple-photos-icloud-photo-library-upload-using-network-link-conditioner/>
<http://tidbits.com/resources/2015-05/Photos-pause-resume-dance.png>

Will's solution revolves around Network Link Conditioner, a preference pane Apple provides to developers to test their apps under simulated poor network conditions. An iPhone app, for instance, has to work properly even if the cellular data connection provides only a few hundred Kbps.

To get Network Link Conditioner, you need a free Apple Developer account. Assuming you have that, the next step is to download the Hardware IO Tools for Xcode; you likely want the most recent release. After downloading, open the Hardware IO Tools disk image and double-click Network Link Conditioner.prefPane to install it in System Preferences.

<https://developer.apple.com/register/>
<https://developer.apple.com/downloads/index.action?q=Network%20Link%20Conditioner>

<http://tidbits.com/resources/2015-05/Hardware-IO-Tools-download-link.png>
<http://tidbits.com/resources/2015-05/Hardware-IO-Tools-disk-image.png>

If you don't have or want an Apple Developer account, TidBITS reader David Schaefer alerted me to the fact that you can download the free Onyx utility and install Network Link Conditioner from the Parameters > Misc tab.

<http://www.titanium.free.fr/onyx.html>

Once the Network Link Conditioner preference pane is open, click Manage Profiles, click the + button to create a new profile, and give it a name. For Downlink Bandwidth, Will recommends setting the limit to something near your connection's maximum throughput; for Uplink Bandwidth, he found that 70 percent of your upload throughput worked well. Feel free to experiment with other numbers; you want them as high as possible without letting Photos impact the performance of other network apps. In this case, I've set my Downlink to 20 Mbps (leaving 10 Mbps of overhead) and Uplink to 3500 Kbps (you can't use fractional numbers like 3.5 Mbps; that's 70 percent of my 5 Mbps uplink bandwidth). Don't change any other settings, since they simulate errors.

<http://tidbits.com/resources/2015-05/Network-Link-Conditioner-profile.png>

Click OK, and if necessary, choose your profile from the Profile pop-up menu. As long as the switch in the Network Link Conditioner preference pane is On, your Mac's bandwidth — and thus what Photos can do to your Internet connection in general — will be throttled. When it's enabled, Network Link Conditioner puts an icon in your menu bar; you can deactivate throttling from that menu as well. Finally, Network Link Conditioner turns itself off automatically when you restart your Mac, so make sure to enable it again if you have to restart before your Photos sync is done.

<http://tidbits.com/resources/2015-05/Network-Link-Condition-main-screen.png>

Once Photos finishes uploading to iCloud Photo Library, you should turn off Network Link Conditioner. But I recommend leaving it installed, because if you import a lot of new shots into Photos, it very well may take over your Internet connection again, necessitating a return to the Network Link Conditioner preference pane to rein in that unruly upload. Better yet, we can hope Apple will update Photos to be friendlier; apps like Dropbox and CrashPlan upload constantly in the background on all my Macs with no noticeable impact on overall performance.

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Editor	Stuart Rabinowitz
Distribution	George Carbonell

Membership: Anyone may become a member. Dues are $12 per year and include a one-year subscription to The Pulp as well as access to the HUGE Public Domain disk libraries and BBS. Meeting topics, times and places can be found on page 1 of this issue.

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Leader: _____George Carbonell   568–0492   george.carbonell@comcast.net
Secretary: _____Charles Gagliardi
Treasurer: _____Charles Gagliardi   233–0370   epencil@aol.com
Director at Large: __Phil Manaker   659-4584   amanaker@earthlink.net
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Director at Large: __Stuart Rabinowitz   633–9038   s.e.rabinowitz@att.net
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