Bits of Blue

A Monthly Publication of the Tampa PC Users Group, Inc.

May in Tampa

Meeting

A Sticky Math Problem
By
Merle Nicholson

Wednesday, May 10

6:30 PM

Pepin Distributing Co.
4121 N 50th Street
Tampa, Florida

INSIDE THIS ISSUE

Meeting Preview: Merle Nicholson will demonstrate using a computer to solve a sticky math problem.

Merle Nicholson will lead the Windows SIG for the first 30 minutes of the meeting.

Editor's Comments

By William LaMartin, Editor, Tampa PC Users Group
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Thanks to Merle Nicholson I have to write very little this month, and that is good, since I have not had much happening this month that would be of interest to a general audience. I have spent a lot of that time updating my Windows 8 app, Cell Towers, to be a Windows 10 Universal app and then to porting it to Android. I also managed, much to my surprise, to install the Windows 10 Creators Update on my minimal Dell Venue 8 Pro Windows tablet.

Windows 10 Creators Update
The Dell Venue 8 Pro tablet, which I won as a prize, has only two GB of RAM and a 32 GB of hard drive, and I thought it was a miracle that I managed to update it to Windows 10 when I did that. I tried to install the next Win 10 update and could not do it for lack of disk space. The update required eight GB, and I only had five free on the drive, no matter how much stuff I deleted.

June Meeting: To be announced

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Minutes of the April Meeting

By Merle Nicholson, Secretary,
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The Windows Special Interest Group (SIG) opens our monthly meeting. Merle Nicholson, the SIG moderator introduces new or little known products and technological developments for discussion by the group. He accepts questions and requests for help in solving problems from attendees.

Our own TPCUG member, William LaMartin, reflecting a current interest in 3D printers showed several pictures and videos of a Microsoft meeting he attended that demonstrated 3D printers. He then showed several YouTube videos of a few in action creating useful plastic objects. William went on with a powerpoint show discussing the upcoming Windows 10 Creators update. William at that point had done updates on three of his computers and was able to describe the slight differences it makes. He went on to show Microsoft Edge and the enhancements that were included: 3D Cities, Loss of the Control Panel in the shortcut menu (right-click on the start menu or Win+x), and how to find it. He went on to show changes to Edge, Search Box new things and a quick demo of Paint 3D. Our thanks go to William for an informative and interesting program. ◆

Comments..........Continued from page 1

What I did not realize at the time was that there was a Windows.old folder that contained the previous operating system that could be deleted (if you let Windows do it via Start > System > Storage > This PC > Temporary Files > Previous version of Windows and do not try to do it yourself).

After not being able to install the next update (for lack of disk space and not knowing the above at the time), I got a notice on the tablet that an update for Windows was available, and much to my surprise, after a couple of tries that was accomplished. That left me with version 1607. And I am not at all sure how that was done
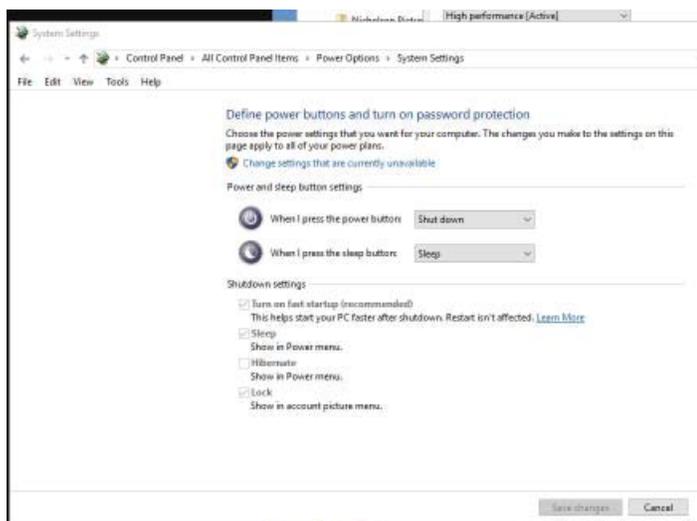
Windows 10 Sleep/ Hibernate/Shutdown

By Merle Nicholson, Secretary,
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Windows 10 has a boot scheme called "Fast Startup". There's a remote possibility of it causing problems with some hardware. Here's a breakdown of all the schemes and the settings and options you have.

Shutting down - and then rebooting - a Windows computer is more complicated than you would guess. There are options to choose the shutdown and restart methods, and in Windows 10, you may not care for the defaults that are set for you, and in some cases have caused some unresolved problems.

Windows 10, if you accept the defaults preset for you, really does shut down OK, it's the restart that will surprise you. By default, a new method called "Fast Startup" is enabled. It really does dramatically reduce the Windows start time if you boot from a conventional hard drive. That goes double for a typical slow notebook mechanical hard drive. But if you're booting from an SSD, there's not much advantage. In any case, regardless of the boot drive, there are some potential annoyances. Hopefully I can tell you what you need to know about this new "feature".

In Control Panel, Power Options, System Settings, you

want to look at the – Shutdown settings – Notice that in order to change any of these settings you first have to click on the blue "Change settings that are currently unavailable", and that to do so, you have to be in an administrator account (that's the blue and yellow shield). After you click on it, it disappears – as in the second picture. You will probably find the "Turn on fast startup (recommended)" already checked.

If that "fast startup" is checked, when you shut down it actually will do a hybrid Hibernate. It's also referred to as "Hybrid Sleep". It's the old style hibernate available in previous Windows editions, with some changes. The old conventional hibernate copies the entire contents of memory to a disk file C:\hiberfil.sys. On the next startup, instead of a traditional boot, that is loading the OS kernel and then loading each of all the drivers and services, it simply restores the contents of that file into memory and resumes where you left off. Fast (or at least faster). For conventional hard drives it saves a lot of time. For SSDs it's technically faster. In notebooks it is useful to overcome the cheap, slow mechanical 5400 RPM hard drives.

I've observed a lot of people using notebooks where when they are finished, they typically just close the lid, putting it to sleep. Sleep is an entirely different thing. The computer – when in sleep mode is still powered up – at least the screen is shut down, and probably the

hard drive too, saving power on the battery, and the wake-up is instantaneous as long as you do that before the battery runs down (a month?). In sleep mode the contents of memory is maintained in memory – just where it was. But it will eventually die when the battery is depleted.

So far you're saying "So What?" Right? The Sleep and (old, conventional) Hibernate restore everything just as it was. If there was an open application it reappears just as you left it. Your keyboard and mouse, touchscreen .. wait a minute, my old printer isn't communicating or my external touchscreen monitor doesn't work unless I unplug it and plug it back in. Maybe you haven't seen any problems and are OK, but maybe you're looking for a reason that your scanner doesn't resume as it should. My own single problem is my new 4K monitor doesn't come back from "fast startup" (Hybrid Sleep). It's black. Not off .. that would be white in this case .. but black, and fortunately I have a second monitor so that I can do a Reset. That fixes it, but not permanently. I have a permanent solution for this if you can bear with me.

To be honest with you, since I have a very fast SSD boot drive, I have had all forms of Hibernate turned off for years. For this article, I turned it back on so I could do the screen captures, and serendipitously had the monitor problem within minutes of doing so. I have no desire to fix it other than to disable Hibernate again. But it was a big Ah Ha moment.

I said I did a Reset to temporarily fix the fast startup problem. This is because Reset is designed to do a real 100% power down and restart from scratch. It is done this way because Windows updates and application installs just couldn't work correctly if it did a sleep, hibernate or "Fast Startup".

In Control Panel, Power Options, there is a "Change advanced power settings". Click that and the Advanced settings panel comes up. Here, you can find several thing of interest on this subject: "Sleep after Setting", "Allow hybrid sleep", "Hibernate after". The "Power buttons and lid" settings determine what happens when you close the lid. Mine is set to "Shut
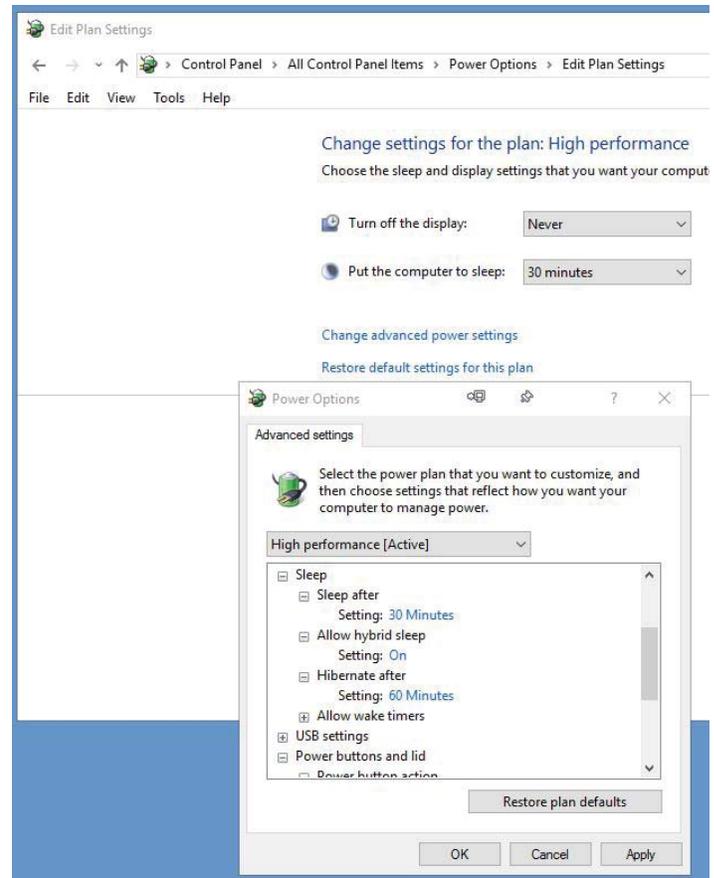
Down". But my notebook uses an SSD. It boots just fast enough, thank you.

"Hybrid Sleep" means hybrid Hibernate. This means that instead of saving the full memory contents to disk, it saves just the operating system kernel and drivers. It closes all applications first before saving, thus greatly reducing the size of the file and the time it takes to restart. The regular Hibernate saves everything, the intention being to restore the desktop just as you left it. Note that you can enable Hibernate and disable Hybrid Hibernate. I wouldn't, but hey – have fun.

Here's one of the big things I don't like about Hybrid Hibernate. It's indistinguishable from a real shutdown and start. You can easily think you have been doing a full shutdown all along and even wasted time trying to figure out why your mouse sometimes doesn't work. How can you tell? Well, you have to look at the settings. See if "Allow hybrid sleep" is on and "Turn on fast startup" is checked. Or maybe you don't experience any problems at all. In my own opinion, though,

Internet Picture of the Month
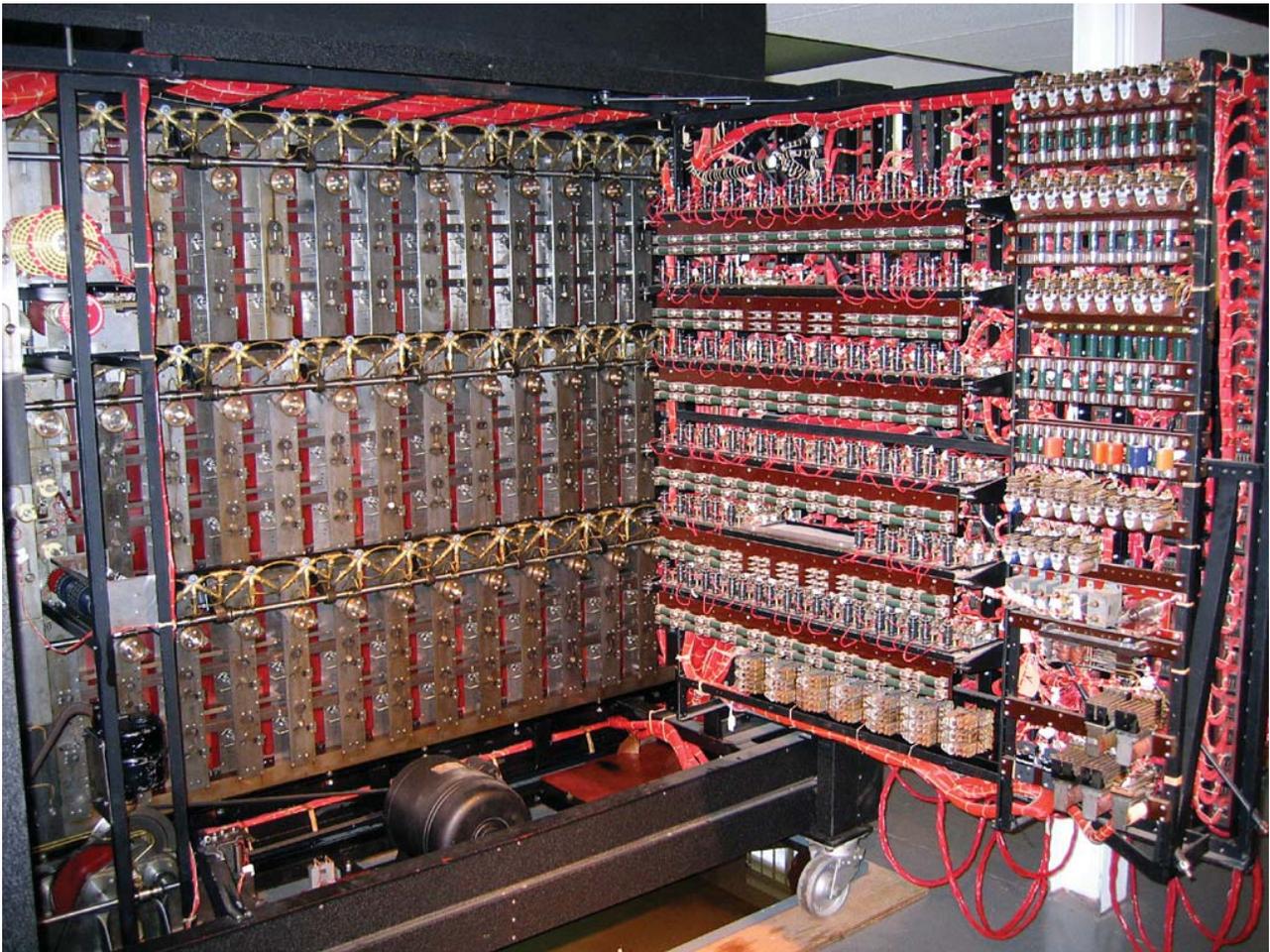
The Bombe

The first "computer" that was used to crack the German's Enigma code. The photo is of the back of the re-built machine from the site http://www.benryves.com/gallery/bletchley. There is also a good write-up there. This is the machine at the center of the recent movie, *The Imitation Game*.

Sleep.........Continued from page 4

it is peripherals – especially older USB devices that may sometimes have a problem, but maybe you don't have any of these.

On my own systems, I simply disable Hibernate using the powercfg.exe application. This has the advantage of automatically erasing the c:\hiberfil.sys file, free-ing up – in my case – 12GB of file space. To do this, open a command prompt for admin. The easiest way for me is to right-click on the start menu, select "Com-mand Prompt (Admin)". This gives you the command prompt box and command line. Here, type: powercfg /h off. There is no message that it's completed, but it should not report an error. Before doing this you can check what you're about to do by typing "powercfg /h /?". This will give you the help topic on what you're about to do. Another effect is that Hibernate no longer appears in the shutdown options. You reinstate it easily with an ON.

For myself, I use different settings between my desk-top unit and my notebook. On my desktop, I set the

power setting for Sleep to "Never", Allow Hybrid Sleep setting Off – not that it would work without a Hibernate file – it can't, and Hibernate After is "Never". Obviously "fast startup" is not enabled. I do leave "Sleep – show in Power menu" enabled, but I have never used it. I just don't see any advantage in Sleep or Hibernate on the desktop. I do have a slideshow screen saver, but it's set for a very long time and it's for entertainment – pictures I especially like.

On the notebook, I have the lid set to "Shutdown", not sleep. On this computer, a quick blip of the power button will put it into sleep. It's like that because if I want it to sleep, I want it to go there deliberately. I'll admit I have used it in the car while travelling. We could make a lunch stop, and I want to leave the laptop in the car but not with an obvious screen on. I put it in sleep and then close the lid, put it out of sight but with the power cube and GPS still plugged in – it does not do a shutdown in that case, and it resumes when we return. Apparently the GPS does some sort of handshake periodically because it has always resumed. But this is rare, maybe two or three times in the five years I've had it. The other thing different is I set is the Display timer. "Turn off the display" "Never" for when it's on external power, and 30 minutes for "on Battery". The desktop doesn't have that option. The display is by far the biggest battery drainer component on the laptop. If I had a mechanical hard drive (I don't) I would set "Turn off hard disk after Setting (minutes)" to the same as the display. ◆
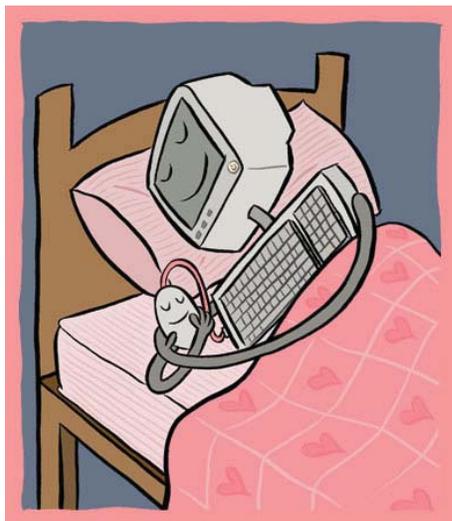
Preparing for Creators Update

By Merle Nicholson, Secretary,
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I'm not sure why I was so fortunate, but one of my two Windows 10 computers was selected for the latest big update a week ago. No, this is not a sad tale, it went fine. In anticipation of that event, I had done some prep work to make sure I could recover in case of a disaster.

My objective is to get an external USB3 hard drive cloned to be exactly like the computer drive and to test it by booting from it. This makes sure you have not lost anything and can get running in minutes in case the update hoses the system. Second objective is to set a restore point. More on that later.

To create the external boot drive there is some prep work to be done in the way of disk cleanup. There is no need to move files over to the external that you don't use, that should be obvious. Cleaning up has the secondary advantage of removing unneeded files from the computer hard drive before the big update gets run. On systems with little unused space it may be critical to clean up first. Even if it's some time to wait until the update and you need to do it again, it's good practice. Besides, all computers need to be cleaned up occasionally to get rid of the accumulated crap.

The first thing to look at is your Downloads directory. This is where I accumulate the most unneeded files. Usually it's an installation exe. It's been installed, and I can replace it online, so I may as well delete it. PDF bank statements that we printed and filed – that kind of stuff. Also it goes without saying, documents and pictures, sometimes just duplicates. Excel files always have backup versions. Then it's time to do the Windows Cleanup. Open "This PC", right-click on the C: drive and select Properties, then a button called "Disk Cleanup". It goes through a system scan. You want to pick out most if not all of these categories. Notice that it includes "Delivery Optimization files", "Recycle Bin" and "Temporary Files". These weren't checked in

my case, so I checked them. When completed, it sends you back to the drive properties. But there's more. Click again on Disk Cleanup button, then click on "Clean up system files". There is another system scan, and if you look at categories, you'll see that some new categories have been added, the most important are the Windows backup installations files.

If you look at your C: drive – as long as you have not hidden system files – you'll may see a Windows.old directory and a couple of folders starting with $windows. In all, as I write this article, I gained 10.3GB of disk space. I also lost the ability to restore to the previous large update. But remember, you were going to lose that ability when the Creators update comes out for you anyway. And that 10.3GB may be just the critical space needed to do the update in the first place.

Next thing to look at are emails. Emails really don't take up much room unless you just don't pay attention to them, but attachments to emails do. Usually if someone sends a picture or two or ten, you copy them somewhere, and it's ok to either delete the email or delete the attachments. Some email systems allow easy sorting. The Outlook I was using and Thunderbird I now use has a column where you can click the header and sort by attachment. That gets all emails with attachments together so you can block delete them all, or open each and delete the attachment itself. When you're done restore the sort you like and then force the email client to compress its file.

Next is the system restore point. To go "System Properties", "System Protection" tab, you can do a search on "create a restore point" or right-click on "This PC", properties, and click on "system protection". You should see your hard drives, and the C: drive protection should be "On". If not, select "Configure" button and configure it on. Windows System updates have a tendency to set this off, which means you have lost the ability to set restore points. When all that is done, click on "Create" button and give it a name. I usually name it something like "before creators update" or something like that. The restore point always carries the date created regardless.

Now we're ready to clone the drive. I usually use an Acronis rescue disk that has a utility 'tools' category with a "clone" function. I've transferred this to a bootable flash drive. Usually if you buy an SSD it comes with a clone drive program that can be used, and of course you can buy one if you don't otherwise have it. You may have a good use for Acronis backup, but if not Acronis has an excellent "Disk Director" program . See our friends Gene and Linda Barlow at http://www.UGR7.com, and be sure tell them how you heard of them and whether or not you're a TPCUG member..

For my PCIE SSD boot drive, Acronis clone will not work so I use Casper at http://www.fssdev.com. It's similar to Acronis, but more expensive than the Barlow's UGR Acronis.

After the Creators update, be sure to look at System Protection to make sure the update did not disable restore points. If it did, the previous restore points have been deleted, and it's time to make one more new one. ◆

other than Windows on its own deleted the Windows.old files.

That got me to thinking that maybe I could also get the Creators Update, and I went to the System Update and asked for new updates and was given a link to tap on to receive the Creators Update. I was informed that I was again short on disk space, and would I like to delete the files in Windows.old to acquire more space. A yes answer to that did not delete the Windows.old folder, but it did remove essentially all the files, giving me more than enough free space on the C drive to do the installation. Thus, I now have the Creators Update on my minimal Windows Tablet. Remarkable.
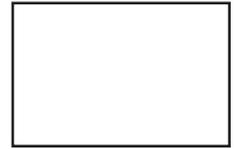
Cell Towers
This is an app I wrote about five years ago, and which someone asked me to update, that will display on a map all the cell towers in a selected county of a se-

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lected state. Actually it is not all the cell towers; rather, all that are in the database I found at the FCC. For example, I know a rancher who leases a plot of land to a tower owner, and that tower is not in the database. Anyway, in the latest information I could find at the FCC, there are a lot of towers in the current database – 240,401 nationally, 882 in Hillsborough County, FL and 4,757 om Los Angeles County, CA. At first, I didn't want to bother updating the app; then, I thought, why not?

I will be updating the app to have that new data along with a new interface where it will run on a Win 10 desktop, Win 10 tablet, a Win 10 phone and hopefully an Android phone and tablet and eventually an iPhone and an iPad. The Windows 10 work and the Android work are close to completion; the iOS work, yet to be started. I make no money on such apps. It's a hobby.

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