

\$3.00

(membership includes monthly subscription)

The Digital

Viking



Twin Cities

PC USER GROUP

NEWSLETTER

Minneapolis & St. Paul, Minnesota USA • Vol. 34 No.8 • March 2014

*TC/PC Exists to
Facilitate and Encourage
the Cooperative Exchange of
PC Knowledge and
Information Across
All Levels of Experience*

March 2014

[Membership Information. 2](#)

[Upcoming Meetings](#)

[And Prize Drawing..... 3](#)

[Programming with Jack](#)

[Lesson 3..... 3](#)

[Nibblers 7](#)

[Protect Your Laptop 9](#)

[SIG Information..... 10](#)

[TC/PC Calendar. 11](#)

[Large Selection of](#)

[Free Backup Utilities.. 12](#)

[The Jeopardy Answer](#)

[Is — What? 14](#)

[Membership Application ... 15](#)

[Maps to Events 16](#)

General Meeting Tuesday, March 11, 2014 7:00 PM

APCUG Webinar

Teen Tech Center At the Central Library

**Location:
Summit Place
8505 Flying Cloud Drive**

Bernie Farrell, Senior Librarian at Hennepin County Library and Director of the Best Buy Teen Tech Center at the Central Library downtown, will give us a virtual tour of this exciting space for area teens. She will explain what technical services, such as music and video production, interactive programming, digital photography, graphic design, and much more, are available to teens ages 12-19, for free as a result of a generous grant from Best Buy. Teens can work under the guidance of trained professionals to complete their projects and then share them with teens around the world through a network. Come and learn about this valuable resource in our own backyard. ☒

6 PM Picture Perfect SIG—Sharon Walbran will demonstrate some techniques for how to correct blurred photos in PhotoShop Elements and take a look at some de-blurring software. ☒

TC/PC is a
Member of



24-Hour Information • www.tcpc.com

Application form inside back cover

TC/PC Business Members

Friendship Village

Metro Sales

Thank You!

The Digital Viking

The Digital Viking is the official monthly publication of the Twin Cities PC User Group, an all-volunteer organization dedicated to users of IBM-compatible computers. Subscriptions are included in membership. We welcome articles and reviews from members. The Digital Viking is a copyrighted publication and reproduction of any material is expressly prohibited without permission. Exception: other User Groups may use material if unaltered and credited.

Disclaimer: All opinions are those of the authors and do not necessarily represent the opinions of the TC/PC, its Board of Directors, Officers, or newsletter staff. TC/PC does not endorse, rate, or otherwise officially comment on products available; therefore, readers are cautioned to rely on the opinions presented herein exclusively at their own risk. The Digital Viking, its contributors, and staff assume no liability for damages arising out of the publication or non-publication of any advertisement, article, or other item. All refunds in full or in partial, for advertising, membership or any other item shall be at the sole discretion of the Twin Cities PC User Group Board of Directors.

Advertising

Full page (7½ x 9½)	\$100.00
Two-thirds page (7½ x 6)	80.00
Half page (7½ x 4¾)	65.00
One-third page (7½ x 3)	50.00
Quarter page (3½ x 4¾)	40.00
Member Bus. Card (2 x 3½)	10.00

Multiple insertion discounts available.

Contact Sharon Walbran at: SQWalbran@yahoo.com

Deadline for ad placement is the 1st of the month prior to publication. All rates are per issue and for digital or camera-ready ads. Typesetting and other services are extra and must be requested in advance of submission deadlines.

Payment must accompany order unless other arrangements are made in advance. Place make checks payable to: **Twin Cities PC User Group**

TC/PC Member Benefits

Product previews
and demonstrations

Special Interest Groups
Monthly Newsletter

Discounts on products
and services

Contests and prizes

Business Member Benefits

All of the above PLUS:

FREE ½ page ad on
payment of each renewal

20% discount on all ads
Placed in the *Digital
Viking* Newsletter

Up to 5 newsletters mailed to
your site
(only a nominal cost for each
additional 5 mailed)

TC/PC 2013-2014 Board of Directors

Meets second Thursday of each month at 7:00 PM. All members welcome to attend.

Call **Ross Held** (612-386-3172) for meeting details.

President — Jim Grotz	jim.grotz@raymondjames.com
Vice President — Curt Trout	ctrout@troutreach.com
Secretary - Sharon Walbran	sqwalbran@yahoo.com
Treasurer - Sheri Trout	strout@troutreach.com
Membership - - Open Position - -	
Meeting Coordinator - - Open Position - -	
Newsletter Publisher Sharon Walbran	952-925-2726 SQWalbran@yahoo.com
Web Master Jack Ungerleider	jack@jacku.com
Jeannine Sloan	Ambassador for Friendship Village
Ron Bruncati	612-377-7936 brunron@mtn.org
Joel Hedland	joelh@spacestar.net
Jim Schlaeppi	jschlaeppi@charter.net
Lon Ortner	612-824-4946 csacomp@comcast.net
Steve Kuhlmeier	steve@kuhlmeysystems.com
Gary Grau	oxygary2389@yahoo.com
Ross Held	RHeld3745@aol.com
David Van Dongen	davidvandongen@yahoo.com

Newsletter Staff

Editor Sharon Walbran

Contributors:

Jeannine Sloan

Jack Ungerleider

March Meeting Prize Drawing

Members attending our March meeting will have a chance to win the book, "Windows 7: The Missing Manual," (approximate value: \$20). O'Reilly Media has given our club this generous prize. Please visit their website, www.oreilly.com, when you are looking for computer books. 

Upcoming Meetings:

Tuesday, April 8, 7:00 PM Social Media: The Journey Continues with Jonathan Freed.

When Jonathan presented at our October meeting, he just touched the surface of the various social media services available to us. He is coming back to expand on that presentation and guide us through exploring more options.

Tuesday, May 13, 7:00 PM 3D Printing. TC/PC member, Bill Ryder, is currently building his own 3D printer from a kit and will bring it to our May meeting and demonstrate how it works. He will explain the process to us and tell us about his experience with the kit. 

Programming with Jack—Lesson 3

By Jack Ungerleider, TC/PC Users Group, Twin Cities, MN

This month we created a group of programs in Python and Scratch that allow the calculation of the day of the week for any date. The programs are based on an algorithm called "Conway's Doomsday Algorithm". Information on the algorithm can be found at:

<http://rudy.ca/doomsday.html>

<http://web.archive.org/web/20061018103244/http://www.cs.wustl.edu/~ksl2/mathpoem.html>

<http://www.timeanddate.com/date/doomsday-weekday.html>

The second link in the group is to a poem that describes the algorithm. This poem is attributed to mathematician John Horton Conway the developer of the algorithm. The origin of the algorithm is said to be correspondence between Conway and author Martin Gardner. Gardner was an expert on the works of Lewis Carroll. He found an algorithm in Carroll's work and sent to Conway to see if he could improve on it. The result is a formula that works as follows:

To determine the day of the week for any date you need to have nearby reference date. For every year you can easily calculate the day of the week for the last day of February (28 or 29) using Conway's formula. This is also the day of the week for an easily defined day for each month of the year. For even numbered months other than February that day is the day that matches the number of the month: 4/4, 6/6, 8/8, 10/10, and 12/12. For odd number months Conway tells to add 4 or subtract 4. It is easier to remember the phrase "9 to 5 and the 7-11". This translates to 5/9, 7/11, 9/5, and 11/7. The month of March also adds 4 so its 3/7. To calculate this day of the week we use a formula that starts with the day for the century year. For our considerations we will look at the 1800s, 1900s and 2000s. For centuries divisible by 400 that day is always Tuesday. The date moves back 2 days or every century until the next 400. This translates into Wednesday for 1900 and Friday for 1800. To this day of the week we add the following calculation done for the year of the century:

Divide the year by 12

Take the remainder

Determine the number of 4s in the remainder

Adds these to the century day and make it number between 1 and 7 (or 0 and 6). This will correspond to “Doomsday”, the day of the week for each of the days listed above. From that you can determine how far away the date you are calculating is and you have the day of the week for that date.

This explanation may seem complicated but when we look at the python code you will see it is fairly simple. The code that comes next is the python code for calculating Doomsday for a given year. After that is the full program that calculates the day of the week for date entered by the user of the program.

```
Doomsday1.py
# Doomsday1.py - Calculate Doomsday DOW for a given year

DOW = ['Sunday', 'Monday', 'Tuesday', 'Wednesday', 'Thursday', 'Friday', 'Saturday']
centuryDay = {18:5, 19:3, 20:2}

year = int(raw_input('Enter Year to calculate Doomsday for: '))

century = year / 100
calcyear = year % 100
dozens = calcyear / 12
remainder = calcyear % 12
fours = remainder / 4
dday = (centuryDay[century]+dozens+remainder+fours) % 7
ddayText = DOW[dday]

print 'Doomsday for', year, ' is ', ddayText
```

```
Doomsday2.py
# Doomsday2.py - Calculate DOW for a given date using Conway's Doomsday Algorithm

DOW = ['Sunday', 'Monday', 'Tuesday', 'Wednesday', 'Thursday', 'Friday', 'Saturday']
centuryDay = {18:5, 19:3, 20:2}
ddayMonth = [31, 28, 7, 4, 9, 6, 11, 8, 5, 10, 7, 12]

getdate = raw_input('Enter date to be processed (MM/DD/YYYY): ')
smonth, sday, syear = getdate.split('/')

year = int(syear)
month = int(smonth)
day = int(sday)

century = year / 100
calcyear = year % 100
dozens = calcyear / 12
remainder = calcyear % 12
fours = remainder / 4
dday = (centuryDay[century]+dozens+remainder+fours) % 7
ddayText = DOW[dday]

calcDay1 = ddayMonth[month-1]
if (year % 4 == 0 and month <3):
    calcDay1 += 1

calcDay2 = (day-calcDay1)
calcDay3 = (calcDay2 + dday) % 7
calcDOW = DOW[calcDay3]

print '%s is a %s' % (getdate, calcDOW)
```

If you examine the code closely you will see all of the elements described above. The list DOW contains the days of the week that can be referenced as the numbers 0-6. The % in some of the functions is the python mod operator that returns the remainder when doing integer division. The division operator will return an

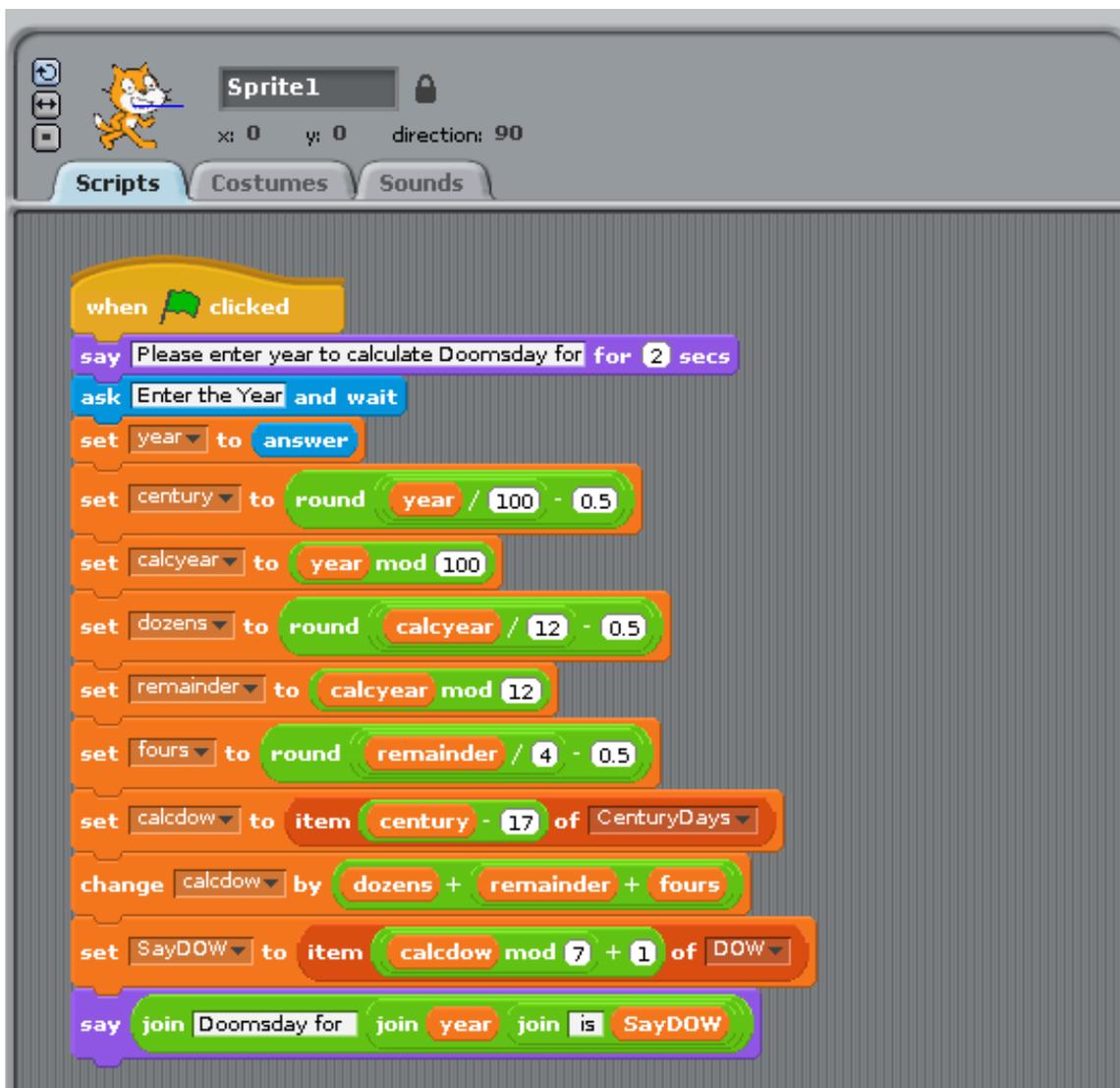
integer if all of the values used in the calculation are integers. For example $10/3$ will return 3. While $10.0/3$ will return 3.3333... So if we start with the year 2014 the century will 20 and the calyear will 14. The number of 12s in 14 is 1. The remainder is 2 and the fours in the remainder is 0. The result is that the variables in the code above will have the following values:

```
centuryDay[century] = 2  
dozens = 1  
remainder = 2  
fours = 0
```

$d_{day} = (2+1+2+0) \bmod 7$ or $5 \bmod 7 = 5$

Looking for element 5 in the DOW list we find that to be Friday. February 28, 2014 was indeed a Friday.

The following images are screen captures of the Scratch programs Doomsday1 and Doomsday2. Please visit the TCPC Linux on Saturday forum and post any questions you might have.



Doomsday1

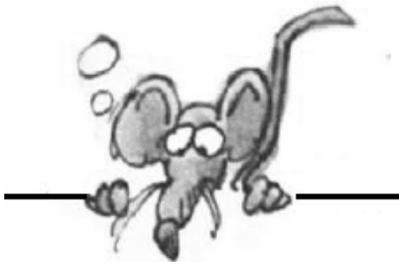
```

when clicked
say Please enter year, month and day when prompted for 2 secs
ask Enter the Year and wait
set year to answer
ask Enter the Month (1-12) and wait
set month to answer
ask Enter the Day (1-31) and wait
set day to answer
set century to round (year / 100 - 0.5)
set calcyear to year mod 100
set dozens to round (calcyear / 12 - 0.5)
set remainder to calcyear mod 12
set fours to round (remainder / 4 - 0.5)
set calcdow to item (century - 17) of CenturyDays
change calcdow by dozens + remainder + fours
set calcDay1 to item month of ddays
if (year mod 4 = 0 and month < 3)
change calcDay1 by 1
set calcDay2 to day - calcDay1
set CalcDay3 to calcDay2 + calcdow mod 7
set SayDOW to item (CalcDay3 + 1) of DOW
say join That date is on SayDOW

```

Doomsday 2

 [Go to Page 1](#)



NIBBLERS

By Jeannine Sloan

Turn Off Remote Control

Turn off the settings that allow someone to control your computer from a remote location. You can always reverse the process. These are the steps for each of the three main versions of Windows OS:

Windows XP Start> settings> Control panel> System> Remote tab Uncheck allow

Windows 7 Start> Control panel> System> Remote settings> Remote tab Uncheck allow

Windows 8.1 Right click start window> System> Remote settings> Remote tab Uncheck allow

Contributed by Sallie Northrop

Play YouTube Videos in Slow (or Fast) Motion

Learn how to watch any YouTube video in slow motion or fast motion. The trick works with Vimeo videos too.

<http://www.labnol.org/internet/youtube-videos-in-slow-motion/28400/>

Early Launch Anti Malware (ELAM)

ELAM comes built into Windows 8. It is an anti-malware that boots before any other drivers so malware cannot get a hold on the system before it is fully started. This and other security features are explained here:

<http://www.notebookreview.com/default.asp?newsID=6624>

What Those TSA Guys Are Really Saying

Example TSA Lingo: Run the Cat Through the X-Ray (idiomatic): Denotes a passenger, usually someone from out of country, who is so unfamiliar and lost in U.S. airport security that they are likely to make significant errors, such as running their cats through the x-ray tunnel. Ex: "We need an officer to go out and help that flustered gentleman out front before he runs the cat through the x-ray. Read more:

<http://tinyurl.com/mzpsb5v>

Use Outlook.Com's Aliases

Why would you want to use an email alias? You can create a hard-to-guess alias as a password recovery address for your online accounts, making it more difficult for hackers to nab your data through the back door. Creating junk addresses to hand over to websites or apps that force you to register is also a great way to keep your personal email address out of the hands of marketers.

<http://tinyurl.com/o3p3xba>

Windows 8.1 Search

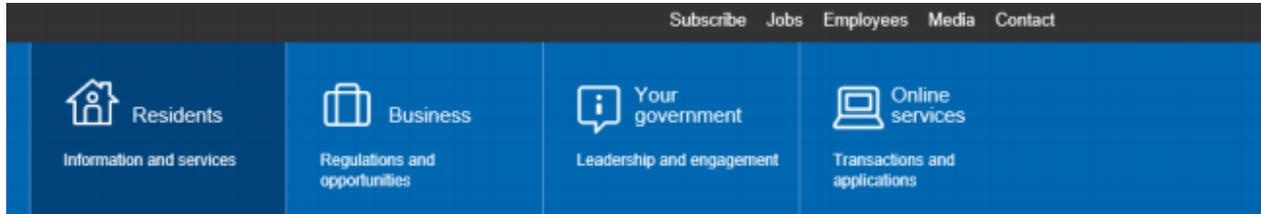
One of the features in Windows 8.1 that deserves some attention is the new comprehensive Search app. Not only will help you to find files and applications on your PC or SkyDrive, but it can also seek out information on the web by linking directly to Bing. And, if that wasn't enough, the Search app has two ways to display the results: 1) a very Windows-like results display that appears on the Search bar, and 2) a Windows 8 app-like full-screen presentation that provides all the results. There's also a detailed settings page that allows you configure how the Search app functions. Let's take a closer look.

<http://tinyurl.com/mo2qtjs>

MN County Websites

County websites are a bonanza for citizens. Browse yours to see what is available by changing the county name and copying this URL into your browser. <http://www.co.countyname.mn.us/>

Illustrated is the header strip from the Hennepin County website.



Facebook's Maze of Privacy Controls

Facebook might be the old social network on the block, but its evolving privacy controls can still be confusing – even to frequent users. Understanding a few key principles and settings can help you quickly gain more control over your Facebook privacy. The subheadings include these: You choose the audience for every post. Privacy is controlled by the person who posts the item. Everything you do on Facebook can be used by marketers. When you share something online, it's no longer truly private. There is instruction and explanation on each topic. Read it here: <http://m.startribune.com/lifestyle/?id=245597651&c=y>
Contributed by Sallie Northrop

Do We Seniors Want To Be Monitored? NO!

But, if I have to be monitored I would choose a system such as “Lively”. A new entry to the market puts sensors on things, not people. Sensors can be placed elsewhere, such as inside a car door. Caregivers, family members and neighbors can log into a website to see the data, plus Lively can automatically send alerts and reminders to designated people. Read more here: <http://mobihealthnews.com/21650/>

3D Printing Becoming A Game Changer

As 3D printers become more affordable and versatile, they are destined to disrupt multiple industries. This article from TechRepublic contains some interesting ideas:
<http://tinyurl.com/lng2w8s>

MSInfo32.exe

MSInfo32.exe is the Windows built-in information gathering tool. This easy to use tool gathers the following information: The version of Windows, OEM System Information, type of CPU, amount of memory and system resources, BIOS version, locale, time zone, user name (only present if the computer is configured to log into a domain), boot device, and the path to the Page file. The tool is very quick to gather information and displays more than you'll ever need in an easy to read window. To run the tool in Windows Vista, Win 7 or Win 8:

1. Click Start
2. Then type msinfo32.exe
3. Tap enter key

A Free Microsoft Office

Microsoft's Office Online is a completely free, web-based version of Microsoft Office. This online office suite is clearly competing with Google Docs, but it's also a potential replacement for the desktop version of Office. Is Office Online worth using? <http://www.howtogeek.com/183299/>

Windows Security

A study from Avecto found that almost all of the vulnerabilities reported by Microsoft in 2013 could be mitigated with one easy change? Disable Administrator Mode if it is Enabled. This is not possible in XP. Read more: <http://www.pcworld.com/article/2098648/>

Tools in Windows 8 | 7

Control Panel System Properties: For knowing just the basics, about your operating system and computer try the

System Control Panel. You can open System Properties by simply pressing the Windows Logo+Break keys or by Right-clicking Computer and choose Properties.

Internet of Things: God's Gift to the NSA

When every device can innocently collect data about our lives and lifestyles, you can bet that someone will be salivating over how to use that information. - See more at:

<http://www.ecommercetimes.com/story/enterprise/80006.html#sthash.qb7n5qIW.dpuf>



Tech Tidbits

Tickers. Typing a ticker symbol into Bing or Google will display the latest financial details for that investment.

Solid State Drives (SSD) do not benefit from defragmentation, you only end up shortening their life span.

Photo DNA: Facebook maintains a blacklist database from federal, state and international law enforcement agencies of explicative images. Each one of the 300 million photos uploaded to the site each day is checked against this list.



Protect Your Laptop

Kathy Frey, Member, Computer Club of Green Valley, AZ, October Issue, Green Bytes

www.ccgvalley.org, Freyrbgv (at) gmail.com

Traveling to and from Green Valley or other parts of the world with a laptop in tow? Then here are a few tips to keep it from being stolen.

- Never leave it in your car.
- Keep it locked with a strong password and lock your case.
- Do not put it on the floor of a restaurant, meeting room, airport, etc. If you do, then put your leg through the strap so you can feel its presence.
- Do not keep your password in or around the case.
- Do not leave it in the care of someone you just met so you can go to the restroom or talk to an airport agent.
- Turn on alarms if you have them so you can hear if someone is tampering with your laptop or laptop case.
- Check on the internet for other ways to secure your valuables whether it be a laptop, iPad, iPhone or other device.
- Treat your electronic gadgets like cash. ☹ [Go to Page 1](#)

Special Interest Groups (SIGs)

w Work phone h Home phone c Cell phone
* Meets at an alternate location

Most SIGs will meet at Edina Executive Plaza, Conference Room #102, 5200 Willson Road, Edina, MN

Confirm with a SIG group if they meet elsewhere.

For more info contact the SIG Leader(s) listed here.

Get SIG announcements!

Link from www.tpc.com

Board of Directors*

All members are welcome! Call for location.

Selected Saturday mornings

Ross Held RHeld83745@aol.com

Community Outreach*

To request services or volunteer to help
Contact:

Ross Held RHeld83745@aol.com

Linux on Saturday

This is for the Linux newbie and those trying to come over from Microsoft to a different operating system.

First Saturday @ 9 AM-Noon

Note: No Meetings June-August

Jack Ungerleider 612/418-3494 c
jack@jacku.com

Picture Perfect

Explore how to use your digital camera and learn how to use a variety of software for editing, organizing, and sharing images and video.

Second Tuesday 6:00—7:00 PM

Every other month

Right before the general meeting

Sharon Walbran SQWalbran@yahoo.com

Microsoft Access

All levels. Presentations by expert developers within the group and by MS reps.

Third Saturday 9:00 AM—Noon

Note: No Meetings June-August

Steve Kuhlmeier 952/934-8492
steve@kuhlmeysystems.com

Microsoft Office

Addresses the use, integration, and nuances of the Microsoft Office applications.

Combined with Systems on Saturday

Third Saturday of the Month

Note: No Meetings June-August

Steve Kuhlmeier 952/934-8492
steve@kuhlmeysystems.com

Web Page Design

Discussion and demonstration of HTML, web publishing software and page design.

Second Tuesday @ 6:00-7:00 PM

Every other month

Right before the general meeting.

Jack Ungerleider 612/418-3494 c
jack@jacku.com

Microsoft Word for PC & Mac

Any level user can be proficient and efficient in basics and advanced features of Word..

Combined with Systems on

Third Saturday 9:00 AM—Noon

Note: No Meetings June-August

Tom Ostertag 612/951-5520 w
651/488-9979 h

Curt Trout 651/484-4569 h
ctrout@troutreach.com

Systems on Saturday

For all levels of computer challenges and any type of computer-related question. Incl. Q&A

Meets 3rd Saturdays 9:00 AM-Noon

Note: No Meetings June-August

Curt Trout 651/484-4569 h
ctrout@troutreach.com

Directions to Summit Place for General Meetings:

Proceed to Eden Prairie Center Flying Cloud Drive . [Flying Cloud Drive runs along the West side of the Eden Prairie Center.] Once you have driven past Eden Prairie Center (on the left) along Flying Cloud Drive you will come to a stop light at Prairie Center Drive. The next intersection with a stop light and left turn lane is Fountain Place. Turn left at Fountain Place and go straight into the parking lot. Turn left again to the first covered entry way of Summit Place. There is plenty of parking in the large parking lot in front of the first Summit Place covered entry way. When you enter the door at the first covered entry way, ask to be directed to the Performance Room for the TC/PC meeting. For a map of more detailed directions and *info on Web SIG and Board meeting*, check the TC/PC website.

Directions to Edina Executive Plaza for Systems on Saturday, Access, Word and Picture Perfect SIGs: Take Highway 100 to the 50th Street/Vernon exit. [If you have come from the north, cross back over Highway 100 to the east side.] Take the first right and go past Perkins [The golf course will be on your left.] and continue on the east frontage road (Willson Road) to the next building—5200 . There is ample parking in the building's lot. Conference Room #102 is on 1st floor.

Help yourself by helping others!

Join the team & share your knowledge with others.

Contact TC/PC at www.tpc.com

Meetings start at 7:00 PM (9:00 AM on Saturday) unless otherwise noted. *Meets at Edina Executive Plaza.

March

April

SUN	MON	TUES	WED	THU	FRI	SAT
						1 Linux and Open Source on Saturdays 9:00—Noon
2	3	4	5	6	7	8
9	10	11 Gen Mtg: Library Teen Tech Center 7:00 PM 6:00PM Pic Perf SIG	12	13	14	15 Windows & MS Office (including Access) 9:00-Noon
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31	1	2	3	4	5 Linux and Open Source on Saturdays 9:00—Noon
6	7	8 Gen Mtg: Social Media—Jonathan Freed 7:00 PM 6:00PM Web SIG	9	10	11	12
13	14	15	16	17	18	19 Windows & MS Office (including Access) 9:00-Noon
20	21	22	23	24	25	26
27	28	29	30		Go to Page 1	

Large Selection of Free Backup Utilities from Gizmo

by Ira Wilsker, iwilsker@sbcglobal.net

WEBSITES:

<http://gtpcc.org>

<http://drive.google.com>

<http://skydrive.live.com>

<https://www.techsupportalert.com/pc/disk-tools.html>

<https://www.techsupportalert.com/best-free-hard-drive-backup-program.htm>

<https://www.techsupportalert.com/best-free-drive-cloning-software.htm>

<https://www.techsupportalert.com/content/types-backup-software-what-s-difference-between-disk-imaging-file-based-backup-or-synchroniz>

<https://www.techsupportalert.com/content/file-backup-terminology-what-do-terms-differential-incremental-mean-and-how-will-they-help-m>

Recently I was the speaker for the monthly meeting of the Golden Triangle PC Club (gtpcc.org), discussing the importance of regular backups, free software that provides backup services, and choices of backup media and services. I cannot over stress the importance of creating and maintaining regular backups of critical files, as it is not a question of "if" a hard drive will fail, but "when" will it fail, possibly taking all of your data and files with it.

I started my presentation with a discussion of backup media and services, including external hard drives, and remote "in the cloud" based backup storage. I showed the assembled crowd some current ads for external hard drives on sale at local stores, with capacities up to 3TB, all for under \$100, with fully capable, high capacity external hard drives currently available locally for as little as \$49. These external hard drives connect to the computer (desktop or laptop) via a USB cable, and are generally a fast and generally reliable way to create and maintain backups of the hard drive. An external hard drive is very portable by nature; when evacuating for a series of major hurricanes (Rita and Ike), the first item I packed was my freshly updated external drive.

There are also several services available that can store users' data "in the cloud", meaning on remote servers, typically through a broadband internet connection. Some cloud backup providers offer several gigabytes of free storage space, which is adequate for safely and securely storing important data files at remote locations. Some examples of this free service include Google Drive (drive.google.com) and Microsoft SkyDrive (skydrive.live.com). According to Google, "Google Drive lets you store up to 15GB of your stuff for free, access them from anywhere, and collaborate with others. One safe place for all your stuff. Upload photos, videos, documents, and other files that are important to you to Google Drive." Microsoft's SkyDrive is similar, but starts at 7GB of free storage. There are several other providers of cloud storage that offer a wide range of storage capacities and fees, many of which offer free starter accounts with storage capacities on par with what is offered by Google and Microsoft.

There are some obvious advantages and disadvantages of using a cloud storage service for very large size backups. While most are nominally priced, often comparable to amortizing an external hard drive over a normal life cycle, and are readily available across of wide range of devices (computers, smart phones, tablets), the problem is the time necessary to perform a backup and restore. While a typical direct USB connection to an external drive is fast, with USB 2.0 providing an effective speed up to 35 MB/second, and USB 3.0 compatible systems providing an effective throughput of 500 MB/second (source: Wikipedia), most household internet upload speeds are much slower. According to published information, most upload speeds on the popular cable internet service providers are in the 1MB to 2MB/second range, with a few high cost premium plans being somewhat faster, but still generally below USB direct connect speeds. Generally, the

upload speeds available to most DSL users is much slower than the upload speeds available over common cable internet connections, but some of the new fiber optic internet connections are starting to offer far superior upload speeds to cloud storage systems; these new fiber connections are still mostly slower than an external hard drive connected directly to a computer via USB. Broadband users of cloud storage systems also need to be aware that some ISPs (Internet Service Providers) cap the volume of data that can be used in a month, either "throttling down" the speed once the cap is reached, or charging significant extra fees for the added data. Users should also be aware that routine internet use may be substantially slowed as backup data is being uploaded.

As far as software utilities to automate and ease the backup process, there are many titles available commercially (paid) with varying features and prices, as well as a good assortment of free backup utilities. Most of the newer external hard drives also come bundled with backup software, often already on the drive, that can quickly be installed on the computer; these software products provided are usually "light" or customized versions of some of the major name brand commercial backup utilities.

The user should decide which types of backups should be performed, as the various software products, both paid and free, offer different types or combinations of backups. Some users prefer a disk image, sometimes called a "clone", "shadow", or "mirror image" of the hard drive. This is a bit by bit copy of the entire hard drive stored on external media, most often another hard drive of some type (internal or external). In the event of a catastrophic hard drive failure, or just simply wanting to totally restore a hard drive to a previous state, this image file can be easily installed, with the finished product being identical in all aspects to the original. Almost all of the backup utilities offer the user the option to immediately upon the installation of the backup software, create a bootable CD or USB flash drive which can be used to boot the computer, and allow the reinstallation of the stored image, even if a blank, new hard drive has been installed.

Many users prefer a file backup, where data files are frequently or continuously backed up to the chosen media (external hard drive or cloud storage), often almost concurrently with the files being saved and written to the original hard drive. Some backup utilities also offer the option of keeping different versions or "iterations" of a file; the real-time backup utility that I am running as I type this can save up to 10 sequential copies of each critical data file, replacing the oldest stored versions of a file with newer versions on a "FIFO" (first in - first out) basis. As my files are stored in "native" or standard formats, I can easily read or open files directly from my external hard drive without the need to go through a backup utility. A variation of this method is "incremental", where a full backup is initially created, with the backup software automatically backing up any new or changed files. Other options are frequently offered by many of the backup utilities.

Gizmo, and his volunteer group of "community" software evaluators, have compiled a listing of the top rated backup utilities. Several members of this all volunteer community have tested these products, and posted their aggregate evaluations on the website, techsupportalert.com. Under the category heading "Best Free Hard Drive Backup Program" (techsupportalert.com/best-free-hard-drive-backup-program.htm), one freeware program, Comodo Backup, won "Gizmo's Freeware award as the best product in its class!" with a perfect score of 5 out of 5 on its community evaluations. The reasons for this top rating, according to the evaluators, are, " Offers Shadow Copy, incremental and differential backup, seven levels of encryption, unrestricted features. Short 3 step process." This is basically an "all-in-one", fully functional utility that can perform all of the major backup tasks, plus can encrypt the backups if desired. Available for free download as "unrestricted freeware" directly from the publisher at backup.comodo.com/download-buy.php, this 24.3MB download is available for older 32-bit machines, and newer 64-bit computers. Comodo Backup will run on all recent Windows operating systems including Windows XP with SP2 (service pack 2), Vista, Windows 7, Windows 8, and Server 2003 and 2008. The other highly regarded backup utilities rated by the community include Backup Maker (Personal Edition), FBackup, AOMEI, and EaseUS Todo Backup.

Some users prefer to make an image copy or "clone" of a hard drive for archival and recovery purposes, or for the purpose of creating identical content on multiple machines. Users must be aware that a single installation of Windows is licensed to be used only on a specific machine, and not on multiple machines. Users who want to legally create multiple clones of computers, such as businesses, schools, and PC builders, must obtain a Microsoft license allowing the process, otherwise there may be stiff legal consequences, as well as functional issues, if the clones are not properly licensed. For those who want to create legal clones, such as an archival copy for recovery purposes, or licensed new computers, Gizmo has a selection of cloning software under the heading "Best Free Drive Cloning Software" at techsupportalert.com/best-free-drive-

cloning-software.htm.

The top rated cloning software, according to Gizmo's community is Macrium Reflect Free, which had the top 5 star rating, and was selected as, "Gizmo's Freeware award as the best product in its class!" The community summary of Macrium Reflect Free's advantages were summarized by the community as, "Very easy to use and fast. can restore individual files, works with Linux files systems, ability to clone hard drives-- including the working system partition, schedule backups easily, very stable and reliable, great compression of backup images, can convert to vhd virtual format, includes WindowsPE recovery. Best of category in frequency of updates." The listed cons, or negatives about this product are much in line that it is intended more as a cloning product, and not a traditional comprehensive backup utility. The community negatively commented about this, "No incremental or differential backups, no file/network support-only in non-free edition." The free version is a small program, only 2.2MB, and can be downloaded directly from majorgeeks.com/files/details/macrium_reflect_free_edition.html. Macrium Reflect Free will run on both 32 and 64-bit systems running Windows XP, Vista, Windows 7, and Windows 8.

Other tested and rated disk cloning programs are Backup & Recovery 2013, Free Drive Image XML, Clonezilla, and PING (PartImage Is Not Ghost). Links to these other programs are on the "Best Free Drive Cloning Software" web page.

With the wide assortment of free and commercial automated backup utilities, and the ready availability of reasonably priced backup media and services, there is no reason not to have and maintain a contemporary backup. If you remember that the three most important words in computing are, "Backup!, Backup!, and Backup!", you may not have to worry about Murphy's first law of computing, "A properly backed up hard drive will never fail; but the first time there is not a current backup, it will always fail at the most inopportune time!" Better safe than sorry - real sorry.  [Go to Page 1](#)

The Jeopardy Answer Is...What?

By Linda Gonse, Editor & Webmaster, Orange County PC Users' Group, CA

The final question on Jeopardy on its September 26 episode was based on the category "Internet." The question was "The animal for which this computer program is named is actually a red panda."

Do you have any idea what that program is? When I tell you the answer, you will shake your head — as I did — and you will say "What? That's not right!"— just as I did.

Are you ready? The answer is "What is Firefox (the internet browser)?"

"Fire fox," in Chinese, is another name for the red panda.

In fact, Mozilla launched a website called "Firefox Live" in November 2011 to educate and raise awareness of the endangered red panda species.

Live videos of three baby red pandas, Bernadette, Dolly, and Winston, that were sheltered at the Knoxville Zoo, were streamed on the Firefox Live website until March 2012. When the babies reached maturity they were sent to breed and become part of the animal families at the Virginia Zoo (Norfolk, Virginia) and the Zoo Boise (Boise, Idaho). Subsequently, the Firefox Live website was retired.

If you'd like to find a red panda in a zoo near you, go to

http://redpandanetwork.org/red_panda/find-a-red-panda-near-you/ 

[Go to Page 1](#)



You have just read an issue of The Digital Viking.

Would you like to receive this delivered directly to your email or business each month?

As a member of TC/PC, the Twin Cities Personal Computer Group, one of the benefits is reading this monthly publication at www.tpc.com.

As a member of TC/PC, you may attend any or all of the monthly Special Interest Group (SIG) meetings and be eligible for software drawings. The small membership fee also includes access to real-live people with answers via our helplines, discounts, and various other perks.

Does membership in this group sound like a good way to increase your computer knowledge?

It's easy to do! Simply fill in the form below and mail it to the address shown.
(If you use the form in this issue, you will receive an extra month for joining now.)



8/14

Here's the info for my TC/PC Membership:

Full name _____

Company name _____

Address _____

City _____ State _____ Zip _____

Home Business Change address: Perm. Temp. 'til _____

Home phone _____ Work phone _____

Online address(es) _____

Where did you hear about TC/PC? _____

I DO NOT want any of my information disclosed.

I DO NOT want to receive any mailings

I'm signing up for:

Individual/Family Membership (\$18)

Business Membership (\$100)

Student [ID required] (\$20)

If an existing member your # _____

Make checks payable to:

Twin Cities PC User Group

341 County Rd C2 W

Roseville, MN 55113

<http://www.tpc.com>

Check # _____ Bill me

New member Renewal Prior member

I'm interested in:

Training classes Volunteering

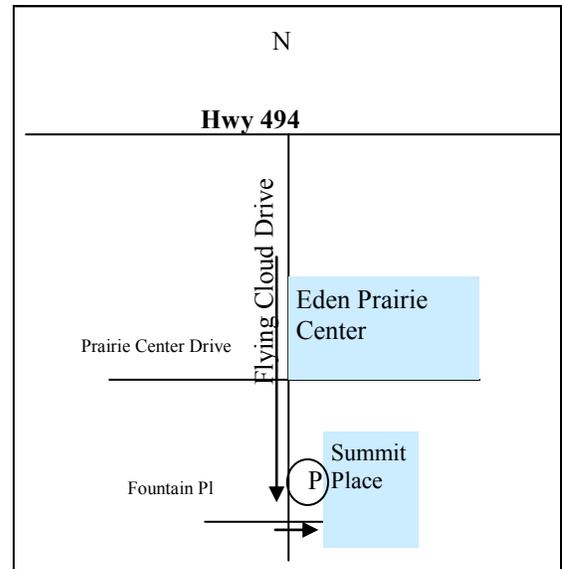
Special Interest Groups: New User, Access, etc.

List here:

Administrative Use Only Rec'd _____ Chk# _____

March 11, 2014
General Meeting 7:00 PM
Teen Tech Center
At the Central Library
Presenter: Bernie Farrell

Summit Place
8505 Flying Cloud Dr
Eden Prairie, MN 55344
More info and map:
www.tpc.com



341 County Rd C2 W
Roseville, MN 55113

FIRST CLASS MAIL